Listing of Parent Companies, Subsidiaries and Affiliates of Petitioner

The American Paper Institute, Inc. is a non-profit national trade association of the pulp, paper and paperboard manufacturing industry, whose 164 member companies, and their divisions, subsidiaries and affiliates primarily engaged in the manufacture of pulp, paper and paperboard products are listed below. This list does not include (in the case of diversified member companies) divisions, subsidiaries or affiliates primarily engaged in other businesses.

Alabama River Pulp Company, Inc.
  Subsidiary of Parsons & Whittemore, Inc.
American Can Company
American Convenience Products, Inc.
Amricon Corporation
Appleton Papers, Inc.
  Subsidiary of B.A.T. Industries
Augusta Newsprint Company
Banner Fibreboard Company
Bay West Paper Company
Bear Island Paper Company
Bird & Son, Inc.
Blandin Paper Company
Boise Cascade Corporation
Bowater, Inc.
Brunswick Pulp & Paper Company
The Buckeye Cellulose Corporation
Burrows Paper Corporation
J.D. Cahill Company, Inc.
Caraustar Industries, Inc.
  Subsidiaries:
    Ashuelot Paper Company, Inc.,
    Austell Box Board Corporation,
    Carolina Paper Board Corporation,

Carotell Paper Board Corporation,
Sweetwater Paper Board Company.
Chicopee
Division of Johnson & Johnson
Champion International Corporation
The Chesapeake Corporation of Virginia
Cleaners Hanger Company
Clevepak Corporation
The Columbia Corporation
Consolidated Packaging Corporation
Consolidated Papers, Inc.
Container Corporation of America
Subsidiary of Mobil Corporation
The Continental Group, Inc., Continental
Forest Industries
Cottrell Paper Company, Inc.
CPM, Inc.
Crane & Company, Inc.
Crown Paper Board Company, Inc.
Crown Zellerbach Corporation
The Crystal Tissue Company
Deerfield Specialty Papers, Inc.
The Dexter Corporation
Diamond International Corporation
Domtar Fine Papers
Dunn Paper Company
Subsidiary of Dennison Mfg. Company
Eastern Fine Paper, Inc.
Division of E.B. Eddy Forest Products, Ltd.
Eastex Division Temple-Eastex, Inc.
Subsidiary of Time, Inc.
Ecusta Paper & Film Group Olin Corporation
Equitable Bag Company, Inc.
Erving Paper Mills
Esleek Manufacturing Company
Exton Paper Manufacturers, Inc.
Federal Paper Board Company, Inc.
Fibre Leather Manufacturing Corporation

Finch, Pruyn & Company, Inc.
Flambeau Paper Corporation
  Subsidiary of Pentair, Inc.
Fletcher Paper Company
Fortifiber Corporation
Foster Paper Company
Fox River Paper Company
  Division of Fox Valley Corp.
Fraser Paper, Limited
French Paper Company
FSC Paper Corporation
  Subsidiary of Field Enterprises, Inc. and Media General, Inc.
Garden State Paper Company, Inc.
  Affiliate of Media General, Inc.
Georgia-Pacific Corporation
Gilman Paper Company
P.H. Glatfelter Company
W.R. Grace & Company
Great Northern Nekoosa Corporation
Green Bay Packaging, Inc.
Greif Board Corporation
Gulf States Paper Corporation
Halltown Paperboard Company
Hammermill Paper Company
Hampden Papers, Inc.
Harriman Paperboard Company
Hazen Paper Company
Heller and Usdan, Inc.
Hercules Inc.
Hoffmaster Company, Inc.
Hollingsworth & Vose Company
Holliston Mills, Inc.
Holyoke Card & Paper Company
Inland Container Corporation
  Subsidiary of Time, Inc.
Inland Empire Paper Company
International Paper Company

ITT Rayonier, Inc.
James River Corporation of Virginia
Jen-Coat, Inc.
Keyes Fibre Company
Kieffer Paper Mills, Inc.
Lawrence Paperboard Corporation
Linweave, Inc.
Litton Industries, Inc.
Longview Fibre Company
Louisiana-Pacific Corporation
Lowe Paper Company
Ludlow Corporation
Lydall Inc.
MacMillan Bloedel, Inc.
Madison Paper Corporation
McIntyre Bros. Paper Company, Inc.
Manistique Pulp & Paper Company
  Subsidiary of Field Enterprises, Inc.
Manville Forest Products Corporation
  Subsidiary of Johns-Manville Corporation
Marcal Paper Mills, Inc.
The Mead Corporation
Menasha Corporation
Menominee Paper Co., Inc.
  Subsidiary of Bell Fibre Products Corporation
Merrimac Paper Company, Inc.
Midtec Paper Corporation
Millers Falls Paper Company
Missisquoi
Mohawk Paper Mills, Inc.
Monadnock Paper Mills, Inc.
Morris Paper Board Company
  Division of Berles Carton Company, Inc.
Mosinee Paper Corporation
National Gypsum Company
The Newark Group
  Subsidiaries:
    California Paperboard Corporation,

Connecticut Paperboard Corporation,
Haverhill Paperboard Corporation,
Middletown Paperboard Corporation,
Natick Paperboard Corporation,
Newark Boxboard Company,
Wisconsin Paperboard Corporation.

Newman & Company, Inc.
Newton Falls Paper Mill, Inc.
Nicolet Paper Company
Affiliate of Philip Morris, Inc.
Nitec Paper Company
Orchids Paper Products-Concel, Inc.
Subsidiary of APL Corporation
Owens-Illinois, Inc.
Packaging Corporation of America
Division of Tenneco, Inc.
Paper Art Company, Inc.
Paper Products, Inc.
Parsons Paper Division, The NVF Company
Pejepscot Paper Division, The Hearst Corporation
Penntech Papers, Inc.
Plainwell Paper Company, Inc.
Affiliate of Philip Morris, Inc.
Pope & Talbot, Inc.
Port Huron Paper Company
Potlatch Corporation
Potsdam Paper Company
The Procter & Gamble Company
The Quaker Oats Company
Riegel Textile Corporation
Rising Paper Company
Rock-Tenn Company
St. Joe Paper Company
St. Regis Paper Company
Scott Paper Company
Seaman Paper Company of Massachusetts, Inc.
Shawano Paper Mills
Simpson Paper Co.
Subsidiary of Simpson Timber Company

H.P. Smith Paper Company
Sonoco Products Company
The Sorg Paper Company
Southeast Paper Manufacturing Company
Southwest Forest Industries, Inc.
Southworth Company
Springprint Paper Products Co.
Stevens & Thompson Paper Company
Division of Dixico Inc.
Stirling Converting Company, Inc.
Stone Container Corporation
Sullivan Paper Company
Tagsons Papers, Inc.
The Tuttle Press Company
Division of Fox Valley Corporation
Union Camp Corporation
Virginia Fibre Corporation
West Carrollton Parchment Company
Willamette Industries, Inc.
Weston Paper and Manufacturing Company, Inc.
Byron Weston Company
Westvaco Corporation
Weyerhaeuser Company
Whitestone Products
Division of IPCO Hospital Supply Corporation
Wisconsin Tissue Mills, Inc.
Affiliate of Philip Morris, Inc.
Yorktowne Paper Mills, Inc.
Subsidiary: Yorktowne Paper Mills of Maine

STATUTORY AND REGULATORY PROVISIONS INVOLVED

Statutory Provisions

Section 201 of PURPA provides in pertinent part (16 U.S.C. § 796):

Section 3 of the Federal Power Act is amended by inserting the following before the period at the end thereof:

> "(17)(A) 'small power production facility' means a facility which—
>
> > "(i) produces electric energy solely by the use, as a primary energy source, of biomass, waste, renewable resources, or any combination thereof; and
> >
> > "(ii) has a power production capacity which, together with any other facilities located at the same site (as determined by the Commission), is not greater than 80 megawatts;
>
> • • •
>
> "(C) 'qualifying small power production facility' means a small power production facility—
>
> > "(i) which the Commission determines, by rule, meets such requirements (including requirements respecting fuel use, fuel efficiency, and reliability) as the Commission may, by rule, prescribe; and
> >
> > "(ii) which is owned by a person not primarily engaged in the generation or sale of electric power (other than electric power solely from cogeneration facilities or small power production facilities);
>
> "(D) 'qualifying small power producer' means the owner or operator of a qualifying small power production facility;

"(18)(A) 'cogeneration facility' means a facility which produces—

"(i) electric energy, and

"(ii) steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating, or cooling purposes;

"(B) 'qualifying cogeneration facility' means a cogeneration facility which—

"(i) the Commission determines, by rule, meets such requirements (including requirements respecting minimum size, fuel use, and fuel efficiency) as the Commission may, by rule, prescribe; and

"(ii) is owned by a person not primarily engaged in the generation or sale of electric power (other than electric power solely from cogeneration facilities or small power production facilities);

"(C) 'qualifying cogenerator' means the owner or operator of a qualifying cogeneration facility;

• • •

"(20) 'evidentiary hearings' and 'evidentiary proceedings' mean a proceeding conducted as provided in sections 554, 556, and 557 of title 5, United States Code;

Section 210 of PURPA provides (16 U.S.C. § 824a-3):

Cogeneration and Small Power Production

(a) COGENERATION AND SMALL POWER PRODUCTION RULES.—Not later than 1 year after the date of enactment of this Act, the Commission shall prescribe, and from time to time thereafter revise, such rules as it determines necessary to encourage cogeneration and small power production which rules require electric utilities to offer to—

(1) sell electric energy to qualifying cogeneration facilities and qualifying small power production facilities and

(2) purchase electric energy from such facilities.

Such rules shall be prescribed, after consultation with representatives of Federal and State regulatory agencies having ratemaking authority for electric utilities, and after public notice and a reasonable opportunity for interested persons (including State and Federal agencies) to submit oral as well as written data, views, and arguments. Such rules shall include provisions respecting minimum reliability of qualifying cogeneration facilities and qualifying small power production facilities (including reliability of such facilities during emergencies) and rules respecting reliability of electric energy service to be available to such facilities from electric utilities during emergencies. Such rules may not authorize a qualifying cogeneration facility or qualifying small power production facility to make any sale for purposes other than resale.

(b) RATES FOR PURCHASES BY ELECTRIC UTILITIES.—The rules prescribed under subsection (a) shall insure that, in requiring any electric utility to offer to purchase electric energy from any qualifying cogeneration facility or qualifying small power production facility, the rates for such purchase—

(1) shall be just and reasonable to the electric consumers of the electric utility and in the public interest, and

(2) shall not discriminate against qualifying cogenerators or qualifying small power producers.

No such rule prescribed under subsection (a) shall provide for a rate which exceeds the incremental cost to the electric utility of alternative electric energy.

(c) RATES FOR SALES BY UTILITIES.—The rules prescribed under subsection (a) shall insure that, in requiring any electric utility to offer to sell electric energy to any qualifying cogeneration facility or qualifying small power production facility, the rates for such sale—

(1) shall be just and reasonable and in the public interest, and

(2) shall not discriminate against the qualifying cogenerators or qualifying small power producers.

(d) DEFINITION.—For purposes of this section, the term "incremental cost of alternative electric energy" means, with respect to electric energy purchased from a qualifying cogenerator or qualifying small power producer, the cost to the electric utility of the electric energy which, but for the purchase from such cogenerator or small power producer, such utility would generate or purchase from another source.

(e) EXEMPTIONS.—(1) Not later than 1 year after the date of enactment of this Act and from time to time thereafter, the Commission shall, after consultation with representatives of State regulatory authorities, electric utilities, owners of cogeneration facilities and owners of small power production facilities, and after public notice and a reasonable opportunity for interested persons (including State and Federal agencies) to submit oral as well as written data, views, and arguments, prescribe rules under which qualifying cogeneration facilities and qualifying small power production facilities are exempted in whole or part from the Federal Power Act, from the Public Utility Holding Company Act, from State laws and regulations respecting the rates, or respecting the financial or organizational regulation, of electric utilities, or from any combination of the foregoing, if the Commission determines such exemption is necessary to encourage cogeneration and small power production.

(2) No qualifying small power production facility which has a power production capacity which, together with any other facilities located at the same site (as determined by the Commission), exceeds 30 megawatts may be exempted under rules under paragraph (1) from any provision of law or regulation referred to in paragraph (1), except that any qualifying small power production facility which produces electric energy solely by the use of biomass as a primary energy source, may be

exempted by the Commission under such rules from the Public Utility Holding Company Act and from State laws and regulations referred to in such paragraph (1).

(3) No qualifying small power production facility or qualifying cogeneration facility may be exempted under this subsection from—

(A) any State law or regulation in effect in a State pursuant to subsection (f),

(B) the provisions of section 210, 211, or 212 of the Federal Power Act or the necessary authorities for enforcement of any such provision under the Federal Power Act, or

(C) any license or permit requirement under part I of the Federal Power Act, any provision under such Act related to such a license or permit requirement, or the necessary authorities for enforcement of any such requirement.

(f) IMPLEMENTATION OF RULES FOR QUALIFYING COGENERATION AND QUALIFYING SMALL POWER PRODUCTION FACILITIES.—(1) Beginning on or before the date one year after any rule is prescribed by the Commission under subsection (a) or revised under such subsection, each State regulatory authority shall, after notice and opportunity for public hearing, implement such rule (or revised rule) for each electric utility for which it has ratemaking authority.

(2) Beginning on or before the date one year after any rule is prescribed by the Commission under subsection (a) or revised under such subsection, each nonregulated electric utility shall, after notice and opportunity for public hearing, implement such rule (or revised rule).

(g) JUDICIAL REVIEW AND ENFORCEMENT.—(1) Judicial review may be obtained respecting any proceeding conducted by a State regulatory authority or nonregulated electric utility for purposes of implementing any requirement of a rule under subsection (a) in the same manner, and under the same require-

ments, as judicial review may be obtained under section 123 in the case of a proceeding to which section 123 applies.

(2) Any person (including the Secretary) may bring an action against any electric utility, qualifying small power producer, or qualifying cogenerator to enforce any requirement established by a State regulatory authority or nonregulated electric utility pursuant to subsection (f). Any such action shall be brought only in the manner, and under the requirements, as provided under section 123 with respect to an action to which section 123 applies.

(h) COMMISSION ENFORCEMENT.—(1) For purposes of enforcement of any rule prescribed by the Commission under subsection (a) with respect to any operations of an electric utility, a qualifying cogeneration facility or a qualifying small power production facility which are subject to the jurisdiction of the Commission under part II of the Federal Power Act, such rule shall be treated as a rule under the Federal Power Act. Nothing in subsection (g) shall apply to so much of the operations of an electric utility, a qualifying cogeneration facility or a qualifying small power production facility as are subject to the jurisdiction of the Commission under part II of the Federal Power Act.

(2)(A) The Commission may enforce the requirements of subsection (f) against any State regulatory authority or nonregulated electric utility. For purposes of any such enforcement, the requirements of subsection (f)(1) shall be treated as a rule enforceable under the Federal Power Act. For purposes of any such action, a State regulatory authority or nonregulated electric utility shall be treated as a person within the meaning of the Federal Power Act. No enforcement action may be brought by the Commission under this section other than—

(i) an action against the State regulatory authority or nonregulated electric utility for failure to comply with the requirements of subsection (f) or

(ii) an action under paragraph (1).

(B) Any electric utility, qualifying cogenerator, or qualifying small power producer may petition the Commission to enforce the requirements of subsection (f) as provided in subparagraph (A) of this paragraph. If the Commission does not initiate an enforcement action under subparagraph (A) against a State regulatory authority or nonregulated electric utility within 60 days following the date on which a petition is filed under this subparagraph with respect to such authority, the petitioner may bring an action in the appropriate United States district court to require such State regulatory authority or nonregulated electric utility to comply with such requirements, and such court may issue such injunctive or other relief as may be appropriate. The Commission may intervene as a matter of right in any such action.

(i) FEDERAL CONTRACTS.—No contract between a Federal agency and any electric utility for the sale of electric energy by such Federal agency for resale which is entered into after the date of the enactment of this Act may contain any provision which will have the effect of preventing the implementation of any rule under this section with respect to such utility. Any provision in any such contract which has such effect shall be null and void.

(j) DEFINITIONS.—For purposes of this section, the terms "small power production facility," "qualifying small power production facility," "qualifying small power producer," "primary energy source," "cogeneration facility," "qualifying cogeneration facility," and "qualifying cogenerator" have the respective meanings provided for such terms under section 3 (17) and (18) of the Federal Power Act.

Section 210 of the Federal Power Act provides (16 U.S.C. § 824i):

Interconnection authority—Powers of Commission; application by state regulatory authority

(a)(1) Upon application of any electric utility, Federal power marketing agency, geothermal power producer (including a producer which is not an electric utility), qualifying cogenerator, or qualifying small power producer, the Commission may issue an order requiring—

(A) the physical connection of any cogeneration facility, any small power production facility, or the transmission facilities of any electric utility, with the facilities of such applicant,

(B) such action as may be necessary to make effective any physical connection described in subparagraph (A), which physical connection is ineffective for any reason, such as inadequate size, poor maintenance, or physical unreliability,

(C) such sale or exchange of electric energy or other coordination, as may be necessary to carry out the purposes of any order under subparagraph (A) or (B), or

(D) such increase in transmission capacity as may be necessary to carry out the purposes of any order under subparagraph (A) or (B).

(2) Any State regulatory authority may apply to the Commission for an order for any action referred to in subparagraph (A), (B), (C), or (D) of paragraph (1). No such order may be issued by the Commission with respect to a Federal power marketing agency upon application of a State regulatory authority.

Notice, hearing and determination by Commission

(b) Upon receipt of an application under subsection (a) of this section, the Commission shall—

(1) issue notice to each affected State regulatory authority, each affected electric utility, each affected Federal power marketing agency, each affected owner or operator of a cogeneration facility or of a small power production facility, and to the public.

(2) afford an opportunity for an evidentiary hearing, and

(3) make a determination with respect to the matters referred to in subsection (c) of this section.

Necessary findings

(c) No order may be issued by the Commission under subsection (a) of this section unless the Commission determines that such order—

(1) is in the public interest,

(2) would—

(A) encourage overall conservation of energy or capital,

(B) optimize the efficiency of use of facilities and resources, or

(C) improve the reliability of any electric utility system or Federal power marketing agency to which the order applies, and

(3) meets the requirements of section 824k of this title.

Motion of Commission

(d) The Commission may, on its own motion, after compliance with the requirements of paragraphs (1) and (2) of subsection (b) of this section, issue an order requiring any action described in subsection (a)(1) of this section if the Commission determines that such order meets the requirements of subsection (c) of this section. No such order may be issued upon the Commission's own motion with respect to a Federal power marketing agency.

Definitions

(e)(1) As used in this section, the term "facilities" means only facilities used for the generation or transmission of electric energy.

(2) With respect to an order issued pursuant to an application of a qualifying cogenerator or qualifying small power producer under subsection (a)(1) of this section, the term "facilities of such applicant" means the qualifying cogeneration facilities or qualifying small power production facilities of the applicant, as specified in the application. With respect to an order issued pursuant to an application under subsection (a)(2) of this section, the term "facilities of such applicant" means the qualifying cogeneration facilities, qualifying small power production facilities, or the transmission facilities of an electric utility, as specified in the application. With respect to an order issued by the Commission on its own motion under subsection (d) of this section, such term means the qualifying cogeneration facilities, qualifying small power production facilities, or the transmission facilities of an electric utility, as specified in the proposed order.

Section 212 of the Federal Power Act provides in pertinent part (16 U.S.C. § 824k):

Orders requiring interconnection or wheeling—Determinations by Commission

(a) No order may be issued by the Commission under section 824i or subsection (a) or (b) of section 824j of this title unless the Commission determines that such order—

(1) is not likely to result in a reasonably ascertainable uncompensated economic loss for any electric utility, qualifying cogenerator, or qualifying small power producer, as the case may be, affected by the order;

(2) will not place an undue burden on an electric utility, qualifying cogenerator, or qualifying small power producer, as the case may be, affected by the order;

(3) will not unreasonably impair the reliability of any electric utility affected by the order; and

(4) will not impair the ability of any electric utility affected by the order to render adequate service to its customers.

The determination under paragraph (1) shall be based upon a showing of the parties. The Commission shall have no authority under section 824i or 824j of this title to compel the enlargement of generating facilities.

Reimbursement of parties subject to orders

(b) No order may be issued under section 824i or subsection (a) or (b) of section 824j of this title unless the applicant for such order demonstrates that he is ready, willing, and able to reimburse the party subject to such order for—

(1) in the case of an order under section 824i of this title, such party's share of the reasonably anticipated costs incurred under such order, and

(2) in the case of an order under subsection (a) or (b) of section 824j of this title—

(A) the reasonable costs of transmission services, including the costs of any enlargement of transmission facilities, and

(B) a reasonable rate of return on such costs, as appropriate, as determined by the Commission.

Issuance of proposed order; agreement by parties to terms and conditions of order; approval by Commission; inclusion in final order; failure to agree

(c)(1) Before issuing an order under section 824i or subsection (a) or (b) of section 824j of this title, the Commission shall issue a proposed order and set a reasonable time for parties to the proposed interconnection or transmission order to agree to

terms and conditions under which such order is to be carried out, including the apportionment of costs between them and the compensation or reimbursement reasonably due to any of them. Such proposed order shall not be reviewable or enforceable in any court. The time set for such parties to agree to such terms and conditions may be shortened if the Commission determines that delay would jeopardize the attainment of the purposes of any proposed order. Any terms and conditions agreed to by the parties shall be subject to the approval of the Commission.

(2)(A) If the parties agree as provided in paragraph (1) within the time set by the Commission and the Commission approves such agreement, the terms and conditions shall be included in the final order. In the case of an order under section 824i of this title, if the parties fail to agree within the time set by the Commission or if the Commission does not approve any such agreement, the Commission shall prescribe such terms and conditions and include such terms and conditions in the final order.

(B) In the case of any order applied for under section 824j of this title, if the parties fail to agree within the time set by the Commission, the Commission shall prescribe such terms and conditions in the final order.

Statement of reasons for denial

(d) If the Commission does not issue any order applied for under section 824i or 824j or this title, the Commission shall, by order, deny such application and state the reasons for such denial.

Utilization of interconnection or wheeling authority in lieu of other authority; limitation of Commission authority

(e) No provision of section 824i or 824j of this title shall be treated—

(1) as requiring any person to utilize the authority of such section 824i or 824j of this title in lieu of any other authority of law, or

(2) as limiting, impairing, or otherwise affecting any authority of the Commission under any other provision of law.

Section 313(b) of the Federal Power Act provides (49 Stat. 860, 16 U.S.C. § 825*l*(b)):

Rehearings; court review of orders

(b) Any party to a proceeding under this Act[*] aggrieved by an order issued by the Commission in such proceeding may obtain a review of such order in the United States Court of Appeals for any circuit wherein the licensee or public utility to which the order relates is located or has its principal place of business, or in the United States Court of Appeals for the District of Columbia, by filing in such court, within sixty days after the order of the Commission upon the application for rehearing, a written petition praying that the order of the Commission be modified or set aside in whole or in part. A copy of such petition shall forthwith be transmitted by the clerk of the court to any member of the Commission and thereupon the Commission shall file with the court the record upon which the order complained of was entered, as provided in section 2112 of Title 28. Upon the filing of such petition such court shall have jurisdiction, which upon the filing of the record with it shall be exclusive, to affirm, modify, or set aside such order in whole or in part. No objection to the order of the Commission shall be considered by the court unless such objection shall have been urged before the Commission in the application for rehearing unless there is reasonable ground for failure so to do. The finding of the Commission as to the facts,

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* In the U.S. Code, "this Act", meaning the Federal Power Act, has been replaced by "this chapter." Title 16 of the U.S. Code has not been enacted into law, however, so the language of FPA § 313 as it appears above, and at 49 Stat. 860, is the official wording of the statute.

if supported by substantial evidence, shall be conclusive. If any party shall apply to the court for leave to adduce additional evidence, and shall show to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for failure to adduce such evidence in the proceedings before the Commission, the court may order such additional evidence to be taken before the Commission and to be adduced upon the hearing in such manner and upon such terms and conditions as to the court may seem proper. The Commission may modify its findings as to the facts by reason of the additional evidence so taken, and it shall file with the court such modified or new findings which, if supported by substantial evidence, shall be conclusive, and its recommendation, if any, for the modification or setting aside of the original order. The judgment and decree of the court, affirming, modifying, or setting aside, in whole or in part, any such order of the Commission, shall be final, subject to review by the Supreme Court of the United States upon certiorari or certification as provided in sections 346 and 347 of Title 28.

Section 4(c) of the Administrative Procedure Act provides (5 U.S.C. § 553(c)):

(c) After notice required by this section, the agency shall give interested persons an opportunity to participate in the rule making through submission of written data, views, or arguments with or without opportunity for oral presentation. After consideration of the relevant matter presented, the agency shall incorporate in the rules adopted a concise general statement of their basis and purpose. When rules are required by statute to be made on the record after opportunity for an agency hearing, sections 556 and 557 of this title apply instead of this subsection.

Section 10(b) of the Administrative Procedure Act provides in pertinent part (5 U.S.C. § 703):

Form and venue of proceeding

The form of proceeding for judicial review is the special statutory review proceeding relevant to the subject matter in a court specified by statute or, in the absence or inadequacy thereof, any applicable form of legal action, including actions for declaratory judgments or writs of prohibitory or mandatory injunction or habeas corpus, in a court of competent jurisdiction.

Section 10(e) of the Administrative Procedure Act provides in pertinent part (5 U.S.C. § 706):

Scope of review

To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

* * *

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.

Regulatory Provisions

The Federal Energy Regulatory Commission's "interconnection" rule provides (18 C.F.R. § 292.303(c)(1)):

(c) *Obligation to interconnect.* (1) Subject to paragraph (c)(2) of this section, any electric utility shall make such interconnections with any qualifying facility as may be necessary to accomplish purchases or sales under this subpart.

The Federal Energy Regulatory Commission's "full avoided cost" rule provides (18 C.F.R. §§ 292.304(b)(2)-(4)):

Rates for purchases.[*]

(a) *Rates for purchases.* (1) Rates for purchases shall:

(i) Be just and reasonable to the electric consumer of the electric utility and in the public interest; and

(ii) Not discriminate against qualifying cogeneration and small power production facilities.

(2) Nothing in this subpart requires any electric utility to pay more than the avoided costs for purchases.

(b) *Relationship to avoided costs.* (1) For purposes of this paragraph, "new capacity" means any purchase from capacity of a qualifying facility, construction of which was commenced on or after November 9, 1978.

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* For the convenience of the Court, §§ 292.304(a) through (b)(1) are included for reference.

(2) Subject to paragraph (b)(3) of this section, a rate for purchases satisfies the requirements of paragraph (a) of this section if the rate equals the avoided costs determined after consideration of the factors set forth in paragraph (e) of this section.

(3) A rate for purchases (other than from new capacity) may be less than the avoided cost if the State regulatory authority (with respect to any electric utility over which it has rate-making authority) or the nonregulated electric utility determines that a lower rate is consistent with paragraph (a) of this section, and is sufficient to encourage cogeneration and small power production.

(4) Rates for purchases from new capacity shall be in accordance with paragraph (b)(2) of this section, regardless of whether the electric utility making such purchases is simultaneously making sales to the qualifying facility.

The Federal Energy Regulatory Commission's definition of "avoided cost" states (18 C.F.R. § 292.101(6)):

"Avoided costs" means the incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source.

The Federal Energy Regulatory Commission's waiver provisions provide (18 C.F.R. § 292.403):

(a) *State regulatory authority and nonregulated electric utility waivers.* Any State regulatory authority (with respect to any electric utility over which it has ratemaking authority) or nonregulated electric utility may, after public notice in the area served by the electric utility, apply for a waiver from the application of any of the requirements of Subpart C [§§ 292.301-.308] (other than § 292.302 thereof).

(b) *Commission action.* The Commission will grant such a waiver only if an applicant under paragraph (a) of this section demonstrates that compliance with any of the requirements of Subpart C is not necessary to encourage cogeneration and small power production and is not otherwise required under section 210 of PURPA.

82-34

Office - Supreme Court, U.S.
FILED
JUL 8 1982
ALEXANDER L. STEVAS,
CLERK

No. __

IN THE

Supreme Court of the United States

OCTOBER TERM, 1981

AMERICAN PAPER INSTITUTE, INC.,

Petitioner,

—v.—

AMERICAN ELECTRIC POWER SERVICE CORPORATION, CONSOLIDATED EDISON COMPANY OF NEW YORK, INC., COLORADO-UTE ELECTRIC ASSOCIATION, INC., FEDERAL ENERGY REGULATORY COMMISSION, *et al.*,

Respondents.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

APPENDIX B

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UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 80-1789

AMERICAN ELECTRIC POWER SERVICE CORPORATION, et al.,
Petitioners,

—v.—

FEDERAL ENERGY REGULATORY COMMISSION,
Respondent,

ELIZABETHTOWN GAS COMPANY,
AMERICAN PAPER INSTITUTE, INC.,
BROOKLYN UNION GAS CO.,
OCCIDENTAL GEOTHERMAL, INC.,
Intervenors.

Petition for Review of Orders of the
Federal Energy Regulatory Commission

Argued 15 September 1981

Decided 22 January 1982

Edward Berlin with whom *Roger Strelow, Thomas M. Lemberg* and *Robert S. Taylor* were on the brief for petitioners.

John A. Cameron, Jr., Attorney, Federal Energy Regulatory Commission, with whom *Jerome Nelson*, Acting General

Counsel, *Jerome M. Feit,* Deputy Solicitor, *A. Karen Hill* and *Glenn J. Berger,* Attorneys, Federal Energy Regulatory Commission, were on the brief for respondent.

John T. Miller, Jr. was on the brief for intervenor, Elizabethtown Gas Company.

Rigdon H. Boykin was on the brief for intervenor, American Paper Institute, Inc.

James E. Rogers, Jr. and *Jeffrey D. Watkiss* were on the brief for intervenor, Occidental Geothermal, Inc.

James Patrick Slattery entered an appearance for intervenor, Brooklyn Union Gas Company.

Kathryn A. Oberly and *Susan V. Cook,* Attorneys, United States Department of Justice, were on the brief for amicus curiae, United States, urging that the Commission's order be upheld.

Robert H. Loeffler, Alan Cope Johnston and *Henry D. Levine* were on the brief for amici curiae, Great Western Malting Company, et al. urging that the Commission's order be upheld.

Philip R. Mann was on the brief for amicus curiae, California Manufacturers Association, urging denial of the petition for review.

Before: ROBINSON, *Chief Judge,* WILKEY and GINSBURG, *Circuit Judges.*

Opinion for the Court filed by *Circuit Judge* WILKEY.

WILKEY, *Circuit Judge:* This appeal involves those provisions of the Public Utility Regulatory Policies Act of 1978 (PURPA) which deal with cogeneration and small power production,[1] and the rules promulgated by the Federal Regulatory Energy Commission ("FERC" or "Commission") to imple-

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1 16 U.S.C. §§ 796(17)-(18), 824a-3, 824i, 824k (Supp. III 1979).

ment these provisions.[2] Petitioners, who are public utilities, challenge FERC on four specific issues. They are: (1) FERC's "full avoided cost" rule; (2) FERC's "simultaneous transaction" rule; (3) FERC's grant of blanket authority to cogenerators to "interconnect" with electric utilities without meeting the requirements of sections 210[3] and 212[4] of the Federal Power Act; and (4) FERC's failure to adopt "fuel use" criteria in determining what cogeneration facilities are "qualifying" facilities eligible for the benefits of PURPA.

We uphold FERC's actions with respect to the simultaneous transaction rule and fuel use. However, we find for the petitioners on the matters of the full avoided cost rule and interconnection, and vacate FERC's rules there.

I. BACKGROUND

Cogeneration is the combined production of electrical power and useful thermal energy, such as heat or steam. Cogeneration usually refers to the use of heat that would otherwise be wasted after electricity is generated ("topping cycle"); the term also applies to systems that generate electricity from heat left over from an industrial process ("bottoming cycle"). Because both heat and electricity are created in a single process, about half as much fuel is used to produce electricity and heat as would be needed to produce the two separately. While cogeneration is not a new concept, its popularity had declined steadily since the turn of the century as energy from central station power plants became relatively inexpensive. With the rise in utility rates in recent years, however, it became apparent that cogeneration might again become economical on a broad scale.[5]

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2 18 C.F.R. §§ 292.101-.602 (1980).

3 16 U.S.C. § 824i (Supp. III 1979).

4 *Id.* § 824k.

5 *See generally* COMPTROLLER GENERAL, U.S. GENERAL ACCOUNTING OFFICE, INDUSTRIAL COGENERATION—WHAT IT IS, HOW IT WORKS, ITS POTENTIAL (1980).

Small power production facilities, on the other hand, for the purposes of this case are those which use biomass, waste, geothermal resources, or renewable resources (including wind, solar energy, and water) to produce electric power. They may have a power production capacity no greater than 80 megawatts.[6]

The cogeneration and small power production provisions of PURPA were one part of a vast complex of five major statutes enacted in 1978, known jointly as the National Energy Act.[7] The provisions sought to encourage both sources of energy production.

Prior to the enactment of PURPA, a cogenerator or small power producer seeking to establish interconnected operation with a utility faced three major obstacles. First, utilities were often unwilling to purchase the other producers' electric output at all or were unwilling to pay an appropriate rate. Second, some utilities charged discriminatorily high rates for backup service to cogenerators and small power producers. Third, a cogenerator or small power producer which provided electricity to a utility ran the risk of being considered a public utility and subjected to extensive state and federal regulations.[8]

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6 16 U.S.C. § 796(17)(A) (Supp. III 1979). *See also* FEDERAL ENERGY REGULATORY COMM'N, DRAFT ENVIRONMENTAL IMPACT STATEMENT: RULEMAKING FOR: SMALL POWER PRODUCTION AND COGENERATION FACILITIES—QUALIFYING STATUS/RATES AND EXEMPTIONS, DOCKET NOS. RM79-54 & RM79-55 (June 1980).

7 The five statutes were PURPA, Pub. L. No. 95-617, 92 Stat. 3117 (1978); National Energy Conservation Policy Act, Pub. L. No. 95-619, 92 Stat. 3206 (1978); Natural Gas Policy Act, Pub. L. No. 95-621, 92 Stat. 3350 (1978); Energy Tax Act, Pub. L. No. 95-618, 92 Stat. 3174 (1978); Powerplant and Industrial Fuel Use Act (hereinafter "Fuel Use Act"), Pub. L. No. 95-620, 92 Stat. 3289 (1978).

8 *See, e.g.*, 123 CONG. REC. 32403 (5 Oct. 1977) (remarks of Sen. Durkin); *id.* at 32419 (remarks of Sen. Hart); *id.* at 32437 (remarks of Sen. Haskell); CONFERENCE REPORT ON THE PUBLIC UTILITY REGULATORY POLICIES ACT, H.R. REP. NO. 1750, 95th Cong., 2d Sess. (1978); EXECUTIVE OFFICE OF THE PRESIDENT, THE NATIONAL ENERGY PLAN 45 (G.P.O. 1977); COMMONWEALTH OF MASSACHUSETTS, COGENERATION: ITS BENEFITS TO NEW ENGLAND (October 1978).

Congress[9] designed section 210 of PURPA[10] to remove these institutional barriers to the development of small power production and cogeneration. Under section 210, each electric utility is required to offer to purchase available electric energy from cogeneration and small power production facilities which obtain qualifying status under section 201[11]; the utility is also obliged to provide backup power and other services to such facilities on a nondiscriminatory basis. Section 210 further directs the Commission to "prescribe, and from time to time thereafter revise, such rules as it determines necessary to encourage cogeneration and small power production . . . ."[12] These rules are to implement the statutory requirement that electric utilities offer to sell electric energy to cogeneration and small power production facilities and to purchase electric energy generated at these facilities. Qualifying small power producers and qualifying cogeneration facilities may be exempted in whole or part by Commission rule from the Federal Power Act, the Public Utility Holding Company Act,[13] and

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9 *See* congressional sources cited note 8 *supra*.

10 16 U.S.C. § 824a-3 (Supp. III 1979).

11 Section 201 of PURPA defines a *small power production facility* as one which "produces electric energy solely by the use, as primary energy source, of biomass, waste, renewable resources, or any combination thereof," with a power production capacity not greater than 80 megawatts. *Id.* § 796(17)(A). A small power producer must use a specified "primary energy source" for all energy generation, except as required for emergency, maintenance, or quality control purposes. *Id.* § 796(17)(B).

Section 201 next defines a *cogeneration facility* as a producer of "(i) electric energy, and (ii) steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating, or cooling purposes . . . ." *Id.* § 796(18)(A). Unlike the provisions governing small power producers, the statute does not specify maximum size or "primary energy source" limitations for the cogenerators. However, in order to qualify, a person "not primarily engaged in the generation or sale of electric power" must satisfy such requirements governing minimum size, fuel use, and fuel efficiency "as the Commission may, by rule, prescribe . . . ." *Id.* § 796(18)(B).

12 *Id.* § 824a-3(a).

13 *Id.* §§ 79 to 79-6.

state laws and regulations respecting rates and the financial or organizational regulation of electric utilities, if the Commission determines such exemption is necessary to encourage cogeneration and small power production.[14]

After giving notice and soliciting comments FERC issued its rules regarding cogeneration rates and exemptions on 19 February 1980.[15] On 15 March 1980 it issued its rules with respect to what cogenerators would be considered "qualifying facilities."[16] Petitioners challenge four facets of these rules.

First, FERC would order the states to set rates for purchases of power from qualifying cogenerators at a level that always (for facilities built after the enactment of the statute) equals the utilities' full "avoided" cost.[17] "Avoided" cost refers to the incremental cost the utility would bear if it were required itself to supply the electricity produced by the cogenerator.[18]

Second, FERC would require utilities, at the cogenerator's option, to engage in a "simultaneous purchase and sale" by which the utility is deemed to have purchased all the cogenerated power, even that used by the cogenerator for itself, and to have sold to the cogenerator the power the cogenerator uses internally.[19]

Third, the Commission by rule[20] made a blanket grant of authority to cogenerators to interconnect with utilities without meeting the substantive and procedural requirements of the

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14 *Id.* § 824a-3(e).
Hereinafter in this opinion all references to cogenerators will also apply, unless otherwise stated, to small power producers.

15 18 C.F.R. §§ 292.101, .301-.602 (1980) (Order No. 69).

16 *Id.* §§ 292.201-.207 (Order No. 70).

17 *Id.* §§ 292.304(b)(2)-(4).

18 *Id.*; *id.* § 292.304(e).

19 *Id.* § 292.304(b)(4).

20 *Id.* § 292.303(c)(1).

Federal Power Act's sections 210[21] and 212,[22] which were added to and amended by sections 202[23] and 204[24] of PURPA.

Fourth, the Commission would not include criteria relating directly to "fuel use" in its rules with respect to what cogenerators are to be deemed "qualifying facilities."[25]

We shall consider each of these issues in turn.

II. ANALYSIS

A. *Full Avoided Cost*[26]

Section 210, "Cogeneration and small power production," of PURPA reads in relevant part:

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21 16 U.S.C. § 824i (Supp. III 1979).

22 *Id.* § 824k.

23 *Id.* § 824i.

24 *Id.* § 824k.

25 FERC did include fuel use criteria in defining qualifying small power production facilities; indeed, it was required by statute to do so. *Id.* § 796(17)(A)(i).

26 The Commission has challenged the standing of petitioners with respect to the full avoided cost and simultaneous transaction issues. It also challenges the ripeness of the full avoided cost issue. We find both challenges to be without merit.

It is well established that "one who has been injured by agency action is presumptively entitled to judicial review." *City of Rochester* v. *Bond*, 603 F.2d 927, 931 (D.C. Cir. 1979). The injury which the full avoided cost rule causes the petitioners is clear. If petitioners prevail before this court, the rule will be changed to permit the states to allow the petitioners to purchase electricity at prices lower than those now required. Nor do we find persuasive FERC's argument that utilities nevertheless cannot be aggrieved because they will "recover their costs in the regulated rates they charge their customers." A utility might or might not be allowed to raise its rates after a likely, lengthy, and costly proceeding before the state utility commission. (The divergent interests of the utilities and the state commissions lead us also to reject FERC's argument that utilities should find the full avoided cost rule unobjec-

(b) RATES FOR PURCHASES BY ELECTRIC UTILITIES

The rules prescribed [by FERC] . . . shall ensure that, in requiring any electric utility to offer to purchase electric energy from any qualifying cogeneration facility or qualifying small power production facility, the rates for such purpose—

(1) shall be just and reasonable to the electric consumers of the electric utility and in the public interest, and

(2) shall not discriminate against qualifying cogenerators or qualifying small power producers.

No such rule prescribed . . . shall provide for a rate which exceeds the incremental cost to the electric utility of alternative electric energy.[27]

Sections 292.304(b)(2) and (b)(4) of FERC's rules require utilities to purchase electricity from qualifying facilities at a rate that "equals" each utility's full avoided cost.[28] By re-

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tionable since FERC's rule 18 C.F.R. § 292.403 (1980) allows "the State regulatory authority" to apply to FERC for a waiver of the rule.)

Moreover, public utilities have an obligation to minimize their costs consistent with their obligation to provide adequate service. *See Texas E. Transmission Corp.* v. *FPC*, 414 F.2d 344 (5th Cir. 1969), *cert. denied*, 398 U.S. 928 (1970). Furthermore, utilities have consistently been allowed to challenge set rates. *See, e.g., Public Sys.* v. *FERC*, 606 F.2d 973 (D.C. Cir. 1979); *Sierra Pac. Power Co.* v. *FPC*, 223 F.2d 605 (D.C. Cir. 1955), *aff'd*, 350 U.S. 348 (1956). And finally, the Federal Power Act at 16 U.S.C. § 825*l* (1976) grants petitioners, as "person[s] . . . aggrieved," standing to challenge FERC's regulations. *See Scanwell Laboratories, Inc.* v. *Shaffer*, 424 F.2d 859 (D.C. Cir. 1970); *National Coal Ass'n* v. *FPC*, 191 F.2d 462 (D.C. Cir. 1951).

As for ripeness, the Federal Power Act precludes review of Commission orders unless sought within 60 days of the Commission's order on rehearing. 16 U.S.C. § 825*l*(b) (1976). Thus if the petitioners fail to pursue their remedies now, they do so at the peril of losing the right ever to challenge the validity of the Commission's regulations.

27 16 U.S.C. § 824a-3(b) (Supp. III 1979).

28 18 C.F.R. §§ 292.304(b)(2)-(4) (1980). What the Commission there calls its full "avoided" cost standard is identical to the statutory concept of the "incremental cost . . . of alternative energy."

quiring the utility to pay the cogenerator exactly what it would have cost the utility to produce the power itself or buy from another source, these rules foreclose the states, unless they apply for and receive a waiver from FERC, from ordering the sharing of any of the benefits of the transaction with the other customers of the utility.

The question before us is whether this result is consistent with the statutory mandate that the rates set by the Commission must, in addition to not discriminating against cogenerators, also be "just and reasonable to the electric consumers of the electric utility" and "in the public interest." We hold that FERC has not adequately justified its adoption of the full avoided cost standard. Therefore the FERC rule is vacated and the matter remanded to the Commission.

Congress could have required the Commission to set rates at full avoided cost. However, Congress did not do so. Instead it specified the three other criteria—the "public interest," and the interests of cogenerators and "electric consumers of electric utilit[ies]"—which the Commission was to consider in setting rates. It is apparent that the Commission did not do this, or at least if it did its rationale and process of consideration were never made explicit. Instead the Commission came to the simplistic and uniform conclusion that the full avoided cost standard would be just and reasonable in every case and that this was necessary to encourage cogeneration in every case.

Congress's *Conference Report on the Public Utility Regulatory Policies Act*[29] makes clear that section 210(b)'s incremental cost *limitation* is not to become a substitute for the "just and reasonable" standard.

> [T]he utility would not be required to purchase electric energy from a qualifying cogeneration or small power production facility at a rate which exceeds the lower of the rate described above, namely a rate which is just and reasonable to consumers of the utility, in the public

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29 Conference Report on the Public Utility Regulatory Policies Act, H.R. Rep. No. 1750, 95th Cong., 2d Sess. (1978).

> interest, and nondiscriminatory, or the incremental cost of alternate electric energy. This limitation on the rates which may be required in purchasing from a cogenerator or small power producer is meant to act as an *upper limit* on the price at which utilities can be required under this section to purchase electric energy.[30]

By ordering that the purchase rate be equal to the full avoided cost in every case, FERC has, without convincing explanation, simply adopted as a uniform rule the maximum purchase rate specified in the statute. Congress made a clear distinction between a "just and reasonable" rate and a rate based on the full avoided cost, though the two *may* coincide. It has long been held that the essence of the just and reasonable standard is a balancing of the interests of the affected parties.[31] Although FERC was *not* to subject cogenerators to complex, traditional utility-type regulation, it was compelled to consider the hard questions which the standard necessarily raises.

The Commission's brief points out, correctly, that the *Conference Report* stated that "the purchase by the utility of the cogenerator's or small power producer's power should not be burdened by the same examination as are utility rate applications, but rather in a less burdensome manner."[32] This sentence, however, does not stand for the proposition that cogenerator applications are to be given *no* examination, but—as the sentence itself says—that these examinations are simply to be conducted "in a *less* burdensome manner." However unburdensome this manner might be, it requires at a minimum that the Commission make clear and explain how the rates it sets are consistent with the statutory criteria. In the case at hand this was not done.

The Commission gave only three reasons for the adoption of its standard. It stated that any benefits to utility customers

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30 *Id.* at 98 (emphasis added).

31 *See, e.g., FPC* v. *Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944).

32 Conference Report on the Public Utility Regulatory Policies Act, H.R. Rep No. 1750, 95th Cong., 2d Sess. 98 (1978).

would lead to "insignificant" rate reductions, that a "split-the-savings" rule would result in precisely the sort of utilities-type regulation which PURPA was designed to avoid, and that allocating all the savings to cogenerators "may provide a significant incentive for a higher growth rate of these technologies."[33] We find these reasons inadequate.

Since the Commission is required by statute to consider the impact of its rate setting on "electric consumers of the electric utility" it is especially necessary for FERC to demonstrate the factual basis for its conclusion of "insignificant" savings for them. The Commission should bear in mind, as Congress surely knew, that inevitably the impact of FERC's rules per consumer will be less than their impact per cogenerator. Moreover, it is possible that if cogeneration becomes substantial, a rate uniformly set at the statutory ceiling may be quite costly to electric consumers. The Commission may be right in its conclusion, but it needs to make its reasoning and findings explicit.

Similarly, the Commission's assertion that a split-the-savings rule would require utilities-type regulation in contravention of the purpose of PURPA is inadequate. FERC appropriately rejected a split-the-savings approach, which would involve calculation of cogenerator costs, since such rate setting would indeed veer toward the public utilities-style rate setting that Congress wanted to avoid. But as the Commission recognizes, there are alternatives to the full avoided cost rule besides the split-the-savings approach, and these may require *no* consideration of the cogenerator's costs. The Commission recognizes, for instance, that it could have permitted state authorities to set purchase rates at some percentage of avoided cost.[34] This approach would not necessarily require any inquiry into the cogenerator's costs, but only into those of the utility.

Finally, in rejecting even this "percentage" alternative to the full avoided cost rule, the Commission asserts that any rate

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33 Record at 3457-60. Compare this with the extensive rationale given by FERC for its non-adoption of fuel use criteria, discussed at pp. 27-37 *infra*.

34 Record at 3459.

below the statutory maximum it has adopted might be insufficient to induce some potential cogenerators either to begin or to continue to cogenerate.[35] Thus, the Commission holds that the bare, unquantified possibility that a rule permitting rates at less than full cost *might* be insufficient to encourage the last kilowatt hour of cogeneration justifies shutting the utility's customers out of any share of the benefits. But this seems entirely inconsistent with the clear intent of section 210(b), which seeks to strike a balance among the interests of cogenerators, "electric consumers of electric utilit[ies]," and the "public interest." FERC should allocate the benefits more evenly between the cogenerators and the utilities if the utilities can demonstrate that, under a percentage of avoided cost approach, an allocation less heavily favoring the cogenerators is in the public interest and the interest of the utilities' electric consumers, and will not disproportionately discourage cogeneration.

It is clear that FERC has failed to meet its obligation to provide the public with the reasoned consideration, decisionmaking, and opinion which it is required to give.[36] On remand we expect the Commission to take a harder look at, especially, the percentage of avoided cost approach. Such an approach might, for example, entail FERC setting a specific percentage, or FERC might permit state commissions to set rates within a range—*e.g.*, 80-100 percent—authorized by the Commission.

We shall now outline some additional concerns raised by the full avoided cost rule, which the Commission should address in its subsequent rulemaking.

It is clear that at least the possibility exists that setting the rates which utilities must pay to cogenerators at too high a level may hurt both "the electric consumers of the electric utility" and the "public interest." This may occur, for example, where the utility is subject to higher pollution control standards than are cogenerators, or when it pays taxes at a higher

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35 *Id.* at 3460.

36 *See generally Public Sys.* v. *FERC*, 606 F.2d 973 (D.C. Cir. 1979).

rate than will cogenerators. In such cases the Commission's rule would presumably violate both the "public interest" and the "just and reasonable" standards of the Act, unless FERC found that the cogenerator provided sufficiently countervailing external public benefits. While we recognize that such costs may not be easily quantifiable, especially at this initial stage of regulation, the Commission may find it possible to take them into account.

Furthermore, if a utility has excess capacity the additional cogeneration encouraged by full avoided cost payments will result in higher rates for all remaining customers of the utility, because that cogeneration will reduce the number of customer-purchased kilowatt-hours over which the utility can spread a share of the fixed costs of that extra capacity. While the regulations will not thereby increase the utility's total cost, they will increase the share of those costs borne by each remaining customer. So long as the regulations largely preclude those remaining customers from receiving any offsetting benefit that would result from purchase rates below full avoided cost, the regulations will make those customers—the beneficiaries of the just and reasonable standard—worse off.

Likewise, *the full avoided cost rule may disadvantage utility customers in other ways.* But for FERC's regulations, the utility may have paid a cogenerator a market purchase rate of something less than the full avoided cost, under a standard industry practice.[37] Since a rate which is below full avoided cost, but still above the cogenerator's cost, could suffice to induce cogeneration, a full avoided cost rule would not be required to meet the statutory directive to encourage cogeneration. Thus, by requiring the payment of full avoided cost to any new cogeneration facility (including those which would have been installed even though purchase rates are less than

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37 There is a traditional manner in the electric utility industry by which two entities which exchange power determine the price of that power, the so-called split-the-savings approach; the price is set somewhere between the incremental cost of the buying utility and the incremental cost of the selling utility, so that each benefits by the transaction. *See* Record at 3455-56.

full avoided cost), the regulations could both fail to induce additional cogeneration and leave the utility and its customers worse off than they might otherwise have been.

We do not say, of course, that the Commission must adopt rules which have no adverse impact on electricity consumers. But we do say that the Commission must consider the rules' impact on these consumers and the public interest in striking the proper balance.

While Congress chose to regulate the market because utilities in the past acted to prevent the participation of cogenerators in the market,[38] the statute does not preclude all consideration of market forces. *Indeed, the command that the interests of consumers and the public be taken into account contemplates consideration of the degree to which market forces may encourage utilities to purchase, and cogenerators to sell, a substantial amount of cogenerated power at a price lower than the statutory limit.*

Cogenerative facilities are no monopoly. They are variously located, they depend on various types of power generation, they have varying excesses of power at different times to sell, and the public utilities to which they sell also have varying demands for additional power. There is nothing very uniform about either the cost or quantity or location or availability of the power generated by any cogenerative source, and the utility to which it sells has many other power sources, including other cogenerators, from which to choose.

This is precisely the type of situation which, assuming that utilities are similarly competitively constrained, the market pricing system admirably regulates, without the intervention of any government agency. The cogenerative sources are not monopolies in any way, for they simply compete in selling power to the public utility, much as the coal companies or the petroleum companies sell power to the public utility. Thus, if the market were competitive, regulation would be unnecessary and market forces would adjust between the public utility's demand and the cogenerative sources' supply to yield the price

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38 *See* pp. 4-6 *supra.*

and quantity of cogenerative power sold to the public utility. If the public utility's need in a particular area were less, it would buy less, and possibly a smaller amount of cogenerative power would be encouraged. But *by this price mechanism the consumer would benefit* by having available additional power at a lower cost than the utility could itself generate that power, and the cogenerative source would benefit by selling power it did not need. It may be possible for the Commission to examine the market forces and set a price, or a price range, for cogenerated power that will allocate to the consumer some of the benefits of a competitive market.

It is this sensitive market mechanism which historically and repeatedly the federal regulatory agencies have found so extremely difficult to replicate. Congress clearly wanted to avoid the stultifying effects of complete public utility regulation in the competitive situation here where it was obviously not needed, although a purely market pricing mechanism for cogenerative power might have been thought incompatible with public utility regulation of the principal source. The mandate of the agency is to balance the interests of cogenerators, consumers, and the public interest. This will be a complex matter, but it is the duty of the agency to try, which apparently it has not done so far. If the agency finds it impossible to achieve by regulatory rules an equitable balance of interests, then it should advise Congress of what is needed in the way of statutory change to achieve the congressional objectives of consumer protection and development of additional power sources.

The upshot of the above is that where competitive forces exist, the Commission should take them into account in determining the degree and type of regulation necessary. Cogenerators are in the same position as coal or oil producers—if they are offered a sufficient price by the public utilities and are relieved from burdensome utility-type regulation, they will produce the needed power and sell it to the public utilities. One reason that these sources have not done so before is that they feared regulation as public utilities. The law which Congress passed was intended to correct the market distortions caused

by government regulations and by the utilities—not to create new ones.

The above discussion assumes that the utilities, as well as the cogenerators, are subject to some competitive restraints. If, on the other hand, the utilities are monopsonists with respect to cogenerators, then the Commission may be justified in its present regulation of rates charged by utilities. However, this is precisely the sort of determination which FERC should make explicit and explain, and it has not done so. Moreover, even if the utilities are monopsonists, it does not necessarily follow that the proper rate level is at full avoided cost. Again, the Commission must explain why the level was set here rather than somewhere else.

We hold therefore that FERC must justify and explain its decision to prohibit in an across-the-board manner rates below full avoided cost. Since it has failed to do so, its rule is vacated.

We recognize that it would probably be an untoward burden and expense to determine permissible rates on a case-by-case, or perhaps even on a cogeneration method-by-cogeneration method basis. Such a requirement would, in fact, be inconsistent with the overarching congressional intent to streamline rather than impede the implementation of cogeneration. Thus our holding should not be read as requiring FERC to establish different standards for a variety of cogeneration cases and methods. A general rule is acceptable, but the Commission must justify and explain it fully, particularly in its balancing of the interests of cogenerators, the public interest, and "electric consumers of the electric utilit[ies]."

B. *Simultaneous Purchase and Sale*[39]

A customer of a utility who needs electric energy for his own industrial purposes may produce it at his own plant or buy it from the local utility. However, if such a customer is unable simultaneously to buy from, and sell power to, the utility, he

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39 *See* note 26 *supra*.

will generally find it uneconomical to generate energy himself even though he may be able to do so more efficiently than the utility. That is not an unusual situation in view of the fact that a utility's retail rate is generally lower than the utility's incremental cost of producing additional capacity or energy.[40] In such circumstances, the prudent customer will allow the utility to build and operate the more expensive plant and supply customers, even though the utility's plant will cost society more than if the customer built a generating plant.

The regulations promulgated by FERC permit a cogenerator, at his option, to indulge in the fiction that the electricity he generates for his own use is simultaneously purchased by a utility and sold back to him.[41] The regulations enable new qualifying small power producers and cogenerators to sell to the utility all of their electric output at the purchasing utility's full avoided cost, and to purchase from the utility any electricity they may need at the traditional retail rate.

Petitioners challenge this rule on two plausible grounds. First, they argue that the Commission has misconstrued the statutory terms "purchase" and "sale." That is, they argue that because the rule here requires utilities to treat cogenerators as if they have engaged in a purchase and sale when in fact none might have occurred, it is violative of the plain meaning of section 210(a) of PURPA, under which the rule was promulgated:

> [The Commission shall] prescribe . . . such rules as it determines necessary to encourage cogeneration and small power production which rules require electric utilities to offer to—
>
> (1) *sell* electric energy to qualifying cogeneration facilities and qualifying small power production facilities and
>
> (2) *purchase* electric energy from such facilities.[42]

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40 The retail rates of utilities have traditionally been based on embedded—*i.e.*, average—costs which are normally less than incremental costs.

41 18 C.F.R. § 292.304(b)(4) (1980).

42 16 U.S.C. § 824a-3(a) (Supp. III 1979) (emphasis added).

Yet it is clear, and petitioners conceded at oral argument, that FERC could have achieved the identical result where the cogenerator in fact engages in an actual sale of all his output to, and an actual purchase of all his input from, the utility. It would be anomalous indeed to treat differently the cogenerator who consumes all the power he generates and one who sells his surplus. Under these circumstances it seems unlikely that Congress intended the narrow definition of "purchase" and "sale" which petitioners urge upon us.

Moreover, it is arguable that the statute itself impels the simultaneous transaction rule. The statute requires non-discriminatory rates for cogenerators, and it is at least plausible that the Commission could find that *not* invoking a simultaneous transaction rule would in fact result in cogenerators paying discriminatory rates. That is, in the absence of a simultaneous transaction rule and assuming that there was no physical purchase or sale between the utility and the cogenerator, the person who chose to cogenerate would pay more for his power than the person who chose to buy from a utility. As discussed earlier,[43] this is a result of the structure of utility rates and can happen even if the cogenerator can generate energy more efficiently than the utility, since the cogenerator must pay his cost of cogeneration and the non-cogenerator must pay only the relatively and artificially lower utility retail rates. Moreover, as was explained in the preceding paragraph, in the absence of FERC's rule the cogenerator who consumes all his power would be treated (discriminatorily) differently from one who sells his surplus. Under these circumstances the Commission could properly require that these effects be avoided by adopting, as it did here, a simultaneous transaction rule.

Finally, it should be borne in mind that one of the most basic purposes of PURPA was to remove the obstacle to cogeneration involved here: utilities were often unwilling to purchase the electric output at all or at an appropriate rate from

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43 *See* pp. 18-19 *supra*.

cogenerators.[44] Under these circumstances we are inclined to give a great deal of deference to FERC's regulations.[45]

Petitioners' second complaint is that the Commission did not adequately consider and explain its decision to require utilities to engage in the simultaneous transaction fiction. Petitioners' argument here parallels its challenge to the Commission's adoption of the full avoided cost rule.

While we find for petitioners on the latter point, we believe that in the matter of the simultaneous transaction fiction the Commission's consideration and explanation of its decision were adequate. The questions begged by the Commission's scanty findings with respect to its adoption of the full avoided cost rule are not raised in the context of its simultaneous transaction rule. The Commission considered the impact on consumers of its rule and concluded that "the utility's customers would benefit whenever a [cogenerator] builds a lower-cost plant than the utility can build, [so] we tentatively recommend that this simultaneous buying and selling be permitted in connection with new facilities."[46] As this passage also indicates, the Commission's simultaneous transaction rule is limited to new qualifying small power producers and cogenerators.

That the Commission considered the impact of its rule on all interested parties is reflected in its "Notice of Proposed Rulemaking Regarding the Implementation of Section 210 of the Public Utilities Regulatory Policies Act of 1978":

> As observed in the Staff discussion paper, an efficient use of society's resources requires that when there is a need for additional capacity, and a utility's customer can construct a new plant more cheaply than a utility can, he should be encouraged to do so. A qualifying facility may have previously used a portion of its electric output to

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44 *See* pp. 4-6 *supra*.

45 Of course, this deference does not extend to regulations not promulgated in conformity with the statute. *See* Part II-A, pp. 8-18 *supra*, and Part II-C, pp. 23-27 *infra*.

46 Record at 2417.

> supply its own power needs. That it chose to generate its own electric power, rather than purchase such power from an electric utility, indicates that there were sufficient economic incentives to so act. To permit such a facility to sell that portion of its electric output to the utility at the utility's avoided costs and replace that electricity from the electric utility at non-incremental (and presumably lower) rates would increase the purchase power costs of the purchasing utility and thus would increase the rates charged to the utility's other customers. The Commission believes that it is not necessary to the encouragement of cogeneration and small power production that a qualifying facility be permitted to obtain avoided cost-based rates for this portion of its electric output. Accordingly, the Commission proposes that for energy generated by a new facility or by capacity installed after the date of issuance of these rules, a qualifying facility be permitted to sell its output at rates established under the section 210(b) of PURPA pricing mechanism while simultaneously purchasing electric energy from a utility pursuant to its retail rate schedules.[47]

Thus we find FERC's rule to be consistent with PURPA and to have been adequately justified by the Commission. Accordingly, we uphold the rule.

C. *Interconnection*

An "interconnection" is a physical connection that permits electricity to flow from one entity to another. The interconnections at issue here are not the usual ones by which a customer takes power *from* a utility but rather those which permit a cogenerator to transmit electricity *to* a utility. Petitioners argue that one of the rules promulgated by FERC is inconsistent with

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47 FERC, Notice of Proposed Rulemaking Regarding the Implementation of § 210 of the Public Utilities Regulatory Policies Act of 1978, at § 292.107 (18 Oct. 1979) (footnote omitted), *reprinted in* Record at 2702-47 to 2702-48.

the Federal Power Act (FPA), as amended and added to in relevant part by PURPA. We agree.

We turn first to the statutes. FPA section 210(c)[48] provides that the Commission may issue an interconnection order with respect to a qualifying cogenerator *only if* the interconnection is in the public interest; would encourage overall conservation of energy or capital, optimize the efficiency of the use of facilities and resources, or improve a utility system's reliability; and meets the requirements of FPA section 212[49] that, inter alia, the interconnection is not "likely to result in a reasonably ascertainable uncompensated economic loss" for any utility or cogenerator, will not place an "undue burden" on any party, will not "unreasonably impair the reliability" of the utility, and will not "impair" the utility's ability "to render adequate service to its customers." FPA section 210(b)[50] provides that the Commission is to give appropriate notice and afford an evidentiary hearing before issuing any such order, and FPA section 212 contains certain specific financial and procedural protections for the party ordered to interconnect (for these purposes, the utility). Section 210(a)(1) of the FPA, as added to and amended by PURPA, states:

> Upon application of any electric utility, Federal power marketing agency, qualifying cogenerator, or qualifying small power producer, the Commission may issue an order requiring—
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> (A) the physical connection of any cogeneration facility, any small power production facility, or the transmission facilities of any electric utility, with the facilities of any such applicant . . . .[51]

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48 16 U.S.C. § 824i(c) (Supp. III 1979).

49 *Id.* § 824k.

50 *Id.* § 824i(b).

51 *Id.* § 824i(a)(1).

Finally, and most significantly, section 210(e)(3) of PURPA states:

> No qualifying small power production facility or qualifying cogeneration facility may be exempted under this subsection from—
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> . . . .
>
> (B) the provisions of section 210, 211, or 212 of the Federal Power Act . . . or the necessary authorities for the enforcement of any such provision of the Federal Power Act . . . .[52]

Against this statutory background, FERC promulgated rule 292.303(c)(1), which reads:

> 292.303 *Electric utility obligations under this subpart.*
>
> . . . .
>
> (c) Obligation to interconnect.
>
> (1) . . . [A]ny electric utility shall make such interconnections with any qualifying facility as may be necessary to accomplish purchases or sales under this subpart.[53]

Petitioners assert, and we find, that this rule is inconsistent with the statutes.

By requiring "*any*" utility to make interconnections with "*any*" cogenerator FERC designates, the Commission would in effect exempt qualifying cogenerators from the other procedural and substantive requirements discussed above in FPA sections 210 and 212, and deprive utilities of the safeguards afforded by those provisions. Section 210(e)(3) of PURPA

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52 *Id.* § 824a-3(e)(3).

53 18 C.F.R. § 292.303(c)(1) (1980). The "subpart" referred to is "Subpart C—Arrangements Between Electric Utilities and Qualifying Cogeneration and Small Power Production Facilities Under Section 210 of the Public Utility Regulatory Policies Act of 1978."

makes clear that FERC may not do this: "No . . . qualifying cogeneration facility may be exempted . . . from the provisions of section 210, 211, or 212 of the Federal Power Act . . . or the necessary authorities for enforcement of any such provision under the Federal Power Act. . . ."[54]

FERC argues that compliance with the literal meaning of the statutory sections would impose an undue burden upon cogenerators. However, the Commission need not impose substantial administrative burdens on those facilities, but rather can adopt streamlined procedures. If the Commission believes that even streamlined procedures are too burdensome, the necessary amendment must come from Congress. FERC's argument extolling the wisdom and popularity of its interpretation is necessarily unavailing when Congress has explicitly chosen a policy to the contrary. As much can be said of the Commission's arguments that the procedures of FPA sections 210 and 212 and PURPA, respectively, would add nothing to the utilities' safeguards built into the Commission's rule on interconnection. The Commission cannot justify its transgression of the statute by saying that it is not convinced that it makes any difference.

The Commission also offers the following argument:

> . . . [S]ection 212(e) of the Federal Power Act states that no provision of the interconnection requirements of the Federal Power Act shall be treated "(1) as requiring any person to utilize the authority of such section 210 or 212 [of the Federal Power Act] in lieu of any authority of law, or (2) as limiting, impairing, or otherwise affecting any other authority of the Commission *under any provision of law*" [emphasis supplied]. As this language plainly shows, the interconnection provisions of the Federal Power Act do not provide the exclusive remedy, where the requirements of Section 210 of PURPA—*i.e.*, "any other provisions of law"—are satisfied.[55]

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54 16 U.S.C. § 824a-3(e)(3) (Supp. III 1979).

55 Brief for Respondent at 64 (brackets in the original).

We find this argument to be wholly unconvincing. FERC contends that the authority it has to encourage cogeneration—one tool for which, it argues, is to grant authority for cogenerators to interconnect with utilities without meeting the other requirements of sections 210 and 212 of the Federal Power Act—cannot be attenuated by other statutory provisions. That is, FERC argues that it has been given specific authority to make the interconnection rule and that other statutory provisions cannot be read as limiting that authority. This assumes the conclusion. It is true that section 212(e) of the FPA was intended to keep specific grants of authority from being vitiated by the general limitations on authority in sections 210 and 212. However, in the case at hand, there is no specific grant of authority involved. Instead, we have a relatively *specific limitation* on authority in PURPA section 210(e)(3) which must control over the relatively *general grant* of authority in FPA section 212(e). The general directive of section 212(e) does not give the Commission a mandate to consign detailed provisions of PURPA itself to the wastebasket as meaningless surplusage. It is well established that

> [h]owever inclusive may be the general language of a statute, it "will not be held to apply to a matter specifically dealt with in another part of the same enactment. . . . Specific terms prevail over the general in the same or another statute which might otherwise be controlling."[56]

Finally, FERC argues that rule 292.303(c)(1) is consistent with PURPA section 210(e)(3) if the latter is interpreted as protecting cogenerators who are *targets* of *other* parties seeking interconnection, and not extended to situations where the cogenerator is an *applicant* for an interconnection itself. While an interesting and not inherently implausible suggestion, the Commission points to no evidence in the legislative history or

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56 *Clifford F. MacEvoy Co.* v. *United States*, 322 U.S. 102, 107 (1944) (quoting *D. Ginsberg & Sons* v. *Popkin*, 285 U.S. 204, 208 (1932)).

the statute itself to justify this interpretation, which is both counterintuitive and inconsistent with the statute's explicit provisions. Nor were we able to find such evidence. Accordingly, we reject the interpretation. The Commission's interconnection rule is hereby vacated.

D. *Fuel Use*

Section 201 of PURPA states:

> "qualifying cogeneration facility" means a cogeneration facility which—
>
> (i) the Commission determines, by rule, meets such requirements (including requirements respecting minimum size, *fuel use,* and fuel efficiency) as the Commission *may,* by rule, prescribe . . . .[57]

The Commission decided against including any fuel use criteria in its definition of qualifying cogeneration facilities. Petitioners challenge this decision as violating the statutory language quoted above, and advocate criteria aimed at limiting oil- and gas-fired cogeneration. FERC argues that the statutory language, on the contrary, gives it the discretion to decide whether or not to include fuel use requirements.

We agree with the Commission for two reasons. First, FERC was not required to establish separate fuel use criteria since the statute says *may,* not must. Second, the regulations it adopted were a reasoned, adequate response to the charge Congress gave it. We consider the two reasons in turn.

1. *Statutory interpretation*

The Supreme Court has repeatedly emphasized that "the starting point for interpreting a statute is the language of the statute itself. Absent a clearly expressed legislative intention to the contrary, that language must ordinarily be regarded as

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[57] 16 U.S.C. § 796(18)(B) (Supp. III 1979) (emphasis added).

conclusive."[58] The analysis of this court in *Sierra Club* v. *Costle*[59] is instructive here, too. In that case we rejected an argument that an agency lacked discretion to adopt emission reduction standards for coal-burning facilities that varied according to the sulfur contents of coal. As we said there, "The absence of any express mandate in this language to adhere to a single percentage reduction standard critically undercuts Sierra Club's arguments that EPA could not vary the standard . . . ."[60] Thus, in the case at hand, in the absence of clear legislative intent to the contrary we decline to read "may" to mean anything but "may."[61] Since the construction of the statute in accordance with its plain meaning does not produce an absurd result, render the statute internally contradictory, or diverge from legislative intent unequivocally expressed in the statute's history, departure from the plain meaning is not warranted.[62]

Other evidence reinforces our conclusion that this interpretation of the statute is the correct one. The Commission reasoned that Congress did not intend to exclude oil- and natural gas-fired cogenerating facilities from qualifying status, because if that were the congressional intent the statute itself would

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58 *Consumer Product Safety Comm'n* v. *GTE Sylvania, Inc.*, 447 U.S. 102, 108 (1980). *See also Lewis* v. *United States*, 445 U.S. 55, 60 (1980); *Touche Ross & Co.* v. *Redington*, 442 U.S. 560, 568 (1979) (and cases cited therein); *Southeastern Community College* v. *Davis*, 442 U.S. 397, 405 (1979) (and cases cited therein); *Reiter* v. *Sonotone Corp.*, 442 U.S. 330, 337 (1979); *United States* v. *Wiltberger*, 18 U.S. (5 Wheat.) 76, 96-97 (1820).

59 657 F.2d 298 (D.C. Cir. 1981).

60 *Id.* at 318.

61 The petitioners' citation of *Calvert Cliffs' Coordinating Comm., Inc.* v. *Atomic Energy Comm'n*, 449 F.2d 1109, 1112-13 (D.C. Cir. 1971), is therefore inapposite. In *Calvert Cliffs'* the statute involved used mandatory language ("shall"), not discretionary language ("may").

62 *See, e.g., Trans Alaska Pipeline Rate Cases*, 436 U.S. 631, 643 (1978).

have contained such a restriction, as it did for small power producers.[63] Moreover, the Commission noted that its interpretation was consistent with the Natural Gas Policy Act of 1978,[64] which expressly allows for exemption from incremental pricing for natural gas used in qualifying cogeneration facilities.[65]

The Commission also concluded that any fuel use restrictions it imposed would apply only to the small facilities Congress had exempted from the Fuel Use Act.[66] By including "fuel use" among the factors that the Commission may consider when qualifying cogenerators, Congress cannot be assumed to have intended to bring small facilities, otherwise exempted, under regulation by the Fuel Use Act just because they seek to become cogenerators. This is underscored by the fact that Congress sought to encourage cogeneration by providing an exemption from fuel use restrictions under the Fuel Use Act for large facilities if they become cogenerators.[67] The Commission concluded that restricting the fuels used by prospective cogeneration facilities if they become cogenerators could simply discourage cogeneration without reducing consumption of oil or natural gas.[68]

Moreover, it should be pointed out that while the conservation of oil and gas was one reason behind the passage of PURPA, it was not the sole reason. The more overarching reason was the efficient allocation and use of this nation's electric energy supplies.[69] Thus petitioners cannot argue that

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63 16 U.S.C. § 796(17)(A)(i) (Supp. III 1979).

64 Record at 2183. The Natural Gas Policy Act of 1978 is codified at 15 U.S.C. §§ 3301-3432 (Supp. III 1979); 42 U.S.C. § 7255 (Supp. III 1979).

65 15 U.S.C. § 3346(c)(3) (Supp. III 1979).

66 Record at 370; *see* 42 U.S.C. §§ 8302(a)(7), (10) (Supp. III 1979).

67 *Id.* § 8322(c).

68 Record at 370-71.

69 16 U.S.C. § 2601(1) (Supp. III 1979).

any policy which might increase the amount of oil and gas used is ipso facto a violation of PURPA, especially when, as here, the language of PURPA specifically authorizes the regulations promulgated. Indeed, the Commission noted that one of PURPA's express purposes is to accomplish "increased conservation of electric energy, increased efficiency in the use of facilities and resources by electric utilities, and equitable retail rates for electric consumers,"[70] and apparently found that fuel use criteria would have the opposite effect, reducing efficient use of facilities and resources.[71] It is also worth noting that Congress was surely cognizant of the rapidly changing nature of the oil and gas import market. The Commission could plausibly argue that the necessity of encouraging every conceivable stopgap measure in order to decrease the reliance on imported oil and gas has declined today from the paramount importance it may have had three years ago when the bill was passed.

2. *FERC's reasoned and adequate consideration*

Turning to the second reason for our upholding of the Commission on this issue, it is clear to us that the regulations promulgated by FERC under the statute were a reasoned and adequate response to the charge Congress gave it. To outline the course of our discussion in this section, we find that FERC considered the advantages and disadvantages of fuel use criteria, but concluded that the burdens they would place on cogeneration, the presence of FERC's fuel *efficiency* criteria, the power of the Department of Energy (DOE) to restrict the fuel use of the largest cogeneration facilities, and the relative pricing of non-petroleum utility power all rendered fuel use criteria unnecessary and undesirable.

In this discussion of why the court concludes that the Commission's rules are reasoned and adequate, two general points should be kept in mind. First of course is that the entire

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70 *Id.*

71 Record at 2182-84.

discussion takes place against the background of our prior finding of discretion for the Commission, so that the most the Commission need show is that its rule was " 'reasonably related to the purposes of the enabling legislation.' "[72] Second, not only do we find each of the reasons discussed below to be convincing separately, but these reasons can be weighted cumulatively, which makes their force overwhelming.

Petitioners claim that "[i]nstead of giving fuel use considerations the 'hard look' required by section 201(18)(B), the Commission gave five reasons for not 'looking' at all."[73] However, it is clear here that petitioners are merely playing a semantic game.[74] If the Commission did give reasons for "not looking," that makes its action indistinguishable from a decision not to invoke fuel use criteria when it *had* looked.

More to the point, the Commission actually did give fuel use considerations the "hard look" that petitioners seek; it simply

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72 *Mourning* v. *Family Publications Serv., Inc.*, 411 U.S. 356, 369 (1973).

Note again that we give more deference to FERC here than had Congress explicitly told FERC to weigh some factor. *Cf.* Part II-A, pp. 8-18 *supra*. *See also* note 45 and accompanying text *supra*.

73 Reply Brief for Petitioners at 49 (footnotes omitted).

74 Petitioners' quotation of the Commission's conclusion that "it is not proper to address this fuel use issue within the context of this program" is at any rate misleading when taken from context. Brief for Petitioners at 62. The context of the sentence is the following paragraph (which was reached, moreover, only after several pages of discussion of possible fuel use criteria):

> Some of the comments stated that permitting cogeneration facilities to use oil, especially in diesel engines, will use up available air quality increments, thereby preventing the conversion of large utility oil-fired boilers to coal. As noted above, the Commission believes it is not proper to address this fuel use issue within the context of this program. However, the Commission has not made a final determination regarding the environmental effects of new diesel cogeneration facilities, and is therefore including in these regulations an interim exclusion from qualification of this technology until work on an environmental impact statement has been completed.

Record at 2184 (Order No. 70, issued 13 March 1980).

concluded for a variety of reasons which we will now discuss that fuel use criteria were inappropriate. That there will inevitably be differences of opinion as to the wisdom and effect of various policies creating incentives and disincentives for cogeneration is apparent; but it is equally apparent that this court has neither the technical expertise nor the constitutional authority to question on the merits the decisions made by an executive branch agency properly empowered by Congress. We can do no more than determine whether the law has been followed, and it is clear that the actions of the Commission are within the delegation made to it by Congress.

The Commission held hearings in various cities to gather testimony regarding its proposals, including the desirability of fuel use criteria, and the record is replete with voluminous written comments that were received and considered. Many of those commenting at the hearings agreed with the Commission that stringent fuel use criteria should be avoided.[75] There was also testimony to the effect that a fuel savings requirement would discourage cogeneration.[76] The Economic Regulatory Administration (ERA) elsewhere acknowledged the burden of these requirements by proposing an amendment easing the evidentiary requirement for cogenerators in areas of the country where most utilities burn oil to generate electricity.[77] The ERA determined that oil-fired cogeneration would in many cases result in a net savings of oil. Similarly, the Commission argued that "a restriction on the use of gas or oil for cogeneration, imposed by the Commission, could discourage cogeneration at the lower heat input levels, while not significantly reducing the use of oil or natural gas."[78] Petitioners object to the use of "the unquantified and unexplained 'fudge' words

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75 Record at 714-15, 774, 1258-59, 2098-99, pp. 71DC2-74DC2 in vol. 1 of D.C. hearings. *See also* Record at 2205-08.

76 *See id.* at 2103-2105 (comment of the California Public Utilities Commission).

77 45 Fed. Reg. 53,368 (1980).

78 Record at 370-71.

'could' and 'significantly,' "[79] but the problems confronting FERC are of first impression and quite possibly unquantifiable. Moreover, we think it worth noting that the language which petitioner uses in criticizing FERC is similarly unquantified and unexplained.

Petitioners themselves concede that a fuel savings requirement might place a "burden on oil and gas fired facilities," but argue that the burden "need not be substantial."[80] They argue that the Commission could provide for "reasonably limited, streamlined procedures." Petitioners' argument continues: "The requisite information on the cogenerator's fuel use must be known to it in order for it to determine the economic viability of the project, and the utility's fuel use should be known by the state regulatory authority."[81] But, as is clear from petitioners' own language here, burdens *would* be placed on prospective cogenerators. That the burdens may seem small goes again to the weight of the factors relied upon by FERC, not their existence. As we stated before, we need not engage in a weighing process in the matter now before us.

Moreover, it is by no means clear that—even assuming arguendo that the petitioners are correct in their assertion that the burdens *should* be perceived as relatively light—that the burdens *would* be perceived as light. The obstacles to cogeneration are both psychological and economic.[82] The Commission could rationally find that it is of paramount importance to remove the *appearance* of regulation as well as its reality. A demonstration by the cogenerator of fuel savings, and the requirements that the prospective cogenerator have "[t]he requisite information on . . . fuel use" and that "the state regulatory authority" be consulted, each entail additional and perhaps substantial psychological barriers to the adoption

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79 Brief for Petitioners at 65.

80 Reply Brief for Petitioners at 54.

81 *Id.* at 55 (footnote omitted).

82 *See* pp. 4-6 and accompanying authority *supra*.

of cogeneration. FERC could reasonably have concluded that, to avoid the appearance of regulation, a general rule of no fuel use requirements might be preferable to a more complex rule. Encouraging cogeneration by eliminating the appearance of regulation might result in oil and gas savings greater than would be effected were complicated regulations undertaken.

The importance of avoiding additional regulations was especially important in light of the fact that the Commission decided that it would promulgate fuel *efficiency* regulations, to which subject we next turn.

We find that the Commission's regulation of fuel *efficiency*—instead of fuel *use*—was a reasoned, adequate response to the charge Congress gave it in section 201 of PURPA. Section 201 mentioned "fuel efficiency" as well as "fuel use" in the same list of requirements that the Commission might prescribe.[83] The Commission made clear its belief that the establishment of minimum efficiency standards for cogeneration facilities would ensure the efficient use of scarce fuels.[84] The Commission specifically observed that so long as cogeneration facilities provide for more efficient use of scarce fuels the national purpose is served.[85] The efficiency standards adopted by the Commission have much the same effect that the fuel use criteria would have, insofar as these efficiency criteria are strictest for cogeneration facilities using oil or gas.[86] The Commission also proposed efficiency standards (although less stringent ones) for facilities using other fuels that are limited in availability such as biomass. It imposed no efficiency standards on facilities using coal or coal-derived fuel, reasoning that "[t]he abundance of this energy resource permits reliance on the market to optimize efficiency."[87] The Commission's

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83 16 U.S.C. § 796(18)(B)(i) (Supp. III 1979).

84 Record at 372 (proposed regulations) (issued 27 June 1979).

85 *Id.* at 2183-84.

86 *Id.* at 371-74.

87 *Id.* at 374.

proposed efficiency standards are higher for gas and oil in order to ensure that these fuels are put to efficient use.[88] Finally, acknowledging that efficiency standards are not useful for bottoming cycle facilities, the Commission promulgated efficiency standards for such facilities *only* to the extent they use oil or gas for supplementary firing to generate electricity.[89]

The Commission also justified its decision not to invoke fuel use criteria by pointing out that the Department of Energy has authority to restrict the fuel use of those cogeneration facilities which have a design capability of consuming fuel at the rate of at least 100 million BTU's per hour.[90] Thus FERC declared in Order No. 70 that "the Commission does not believe it necessary or appropriate to require an additional layer of fuel use regulation on technologies which the Commission is charged with encouraging and for which another agency has authority to restrict fuel use."[91] Petitioners argue that this reason has attenuated importance since only some cogenerators meet the 100 million BTU's per hour standard. However, the issue before us remains less the weight of FERC's reasons than their existence.

Finally, the Commission reasoned that fuel use criteria were unnecessary since—because the operation of coal-, nuclear-, or hydro-powered generating stations is much less expensive than operating oil- or gas-fired plants—a cogenerator in most places will find it more economical to purchase utility-generated electricity when that power is coal-, nuclear-, or hydro-generated and the cogenerator uses oil or gas. The Commission thus decided that these market forces "rather than an additional layer of Federal fuel use regulation" should determine the appropriate use of oil and gas.[92] Petitioners question the

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88 *Id.* at 372-74.

89 *Id.* at 2217.

90 *See, e.g.*, 42 U.S.C. §§ 8302(a)(7)(A)(i), 8302(a)(10)(A)(i), 8311, 8312, 8341, 8342 (Supp. III 1979).

91 Record at 2183.

92 *Id.* at 2382.

economic model on which the respondents' argument is based. However, it is not for this court to decide among Chicagoan, Austrian, or Harvardian economic models. Again, the only question properly before us is whether the Commission has based this decision on some plausible evidence.

Thus we conclude that the Commission was granted discretion in its decision to invoke or not to invoke fuel use criteria and that its decision not to do so was a reasoned and adequate response to Congress' charge. FERC considered the advantages and disadvantages of such criteria, and concluded that the burdens they would place on cogeneration, the presence of its fuel efficiency criteria, the power of DOE to restrict the fuel use of the larger facilities, and the price of non-petroleum utility power all rendered fuel use criteria unnecessary or undesirable or both.

III. Conclusion

On the four issues before us today we hold: (1) With respect to FERC's "full avoided cost" rule, FERC did not justify and explain its decision to adopt the rule. Its present rule is hereby vacated. Presumably FERC will want to reconsider its whole position on this problem in the light of this opinion. (2) FERC's "simultaneous transaction" rule is left standing, since it is consistent with congressional intent. (3) FERC's grant of blanket authority to cogenerators to "interconnect" with electric utilities without meeting the requirements of sections 210 and 212 of the Federal Power Act, on the other hand, disregards the relevant statutory provisions. The Commission rule granting this authority is hereby vacated. (4) Finally, we hold that FERC's decision not to invoke "fuel use" criteria in determining what cogeneration facilities are qualifying facilities eligible for the benefits of PURPA is reasoned and in accord with the statute.

So ordered.

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 80-1789

September Term, 1981

AMERICAN ELECTRIC POWER SERVICE CORPORATION, ET AL.,
Petitioners,

—v.—

FEDERAL ENERGY REGULATORY COMMISSION,
Respondent,

ELIZABETHTOWN GAS COMPANY, AMERICAN PAPER INSTITUTE, INC., BROOKLYN UNION GAS CO., and OCCIDENTAL GEOTHERMAL, INC.,
Intervenors.

Before:

ROBINSON, *Chief Judge,*
WILKEY and GINSBURG, *Circuit Judges.*

ORDER

IT IS ORDERED, *sua sponte,* that the Clerk shall withhold issuance of the mandate herein until seven days after disposition of any timely petition for rehearing. See Local Rule 14, as amended on November 30, 1981. This instruction to the Clerk is without prejudice to the right of any party at any time to move for expedited issuance of the mandate for good cause shown.

FOR THE COURT:

GEORGE A. FISHER
Clerk

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

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September Term, 1981

AMERICAN ELECTRIC POWER SERVICE CORPORATION, ET AL.,

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—v.—

FEDERAL ENERGY REGULATORY COMMISSION,

Respondent,

ELIZABETHTOWN GAS COMPANY, ET AL.,

Intervenors.

Before:

ROBINSON, *Chief Judge;*
WILKEY and GINSBURG, *Circuit Judges.*

ORDER

Upon consideration of the joint motion of intervenors American Paper Institute, Inc. and Occidental Geothermal, Inc. for stay of mandate, and the response of petitioners in opposition thereto, it is

ORDERED, by the Court, that the aforesaid motion is granted and the mandate herein is stayed for a period of 30 days from the date of this order.

Per Curiam

FOR THE COURT:

By s/ GEORGE A. FISHER
Clerk

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 80-1789

September Term, 1981

AMERICAN ELECTRIC POWER SERVICE CORPORATION, ET AL.,

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—v.—

FEDERAL ENERGY REGULATORY COMMISSION,

Respondent,

ELIZABETHTOWN GAS COMPANY, AMERICAN PAPER INSTITUTE, INC., BROOKLYN UNION GAS CO., OCCIDENTAL GEOTHERMAL, INC.,

Intervenors.

Before:

ROBINSON, *Chief Judge;*
WILKEY and GINSBURG, *Circuit Judges.*

ORDER

Upon consideration of respondent's (Federal Energy Regulatory Commission) motion to stay mandate, and no opposition having been filed thereto, it is

ORDERED, by the Court, that respondent's aforesaid motion is granted and the Clerk is directed not to issue the mandate herein prior to May 11, 1982.

Per Curiam

FOR THE COURT:

By s/ GEORGE A. FISHER
Clerk

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Docket No. RM79-55

Before Commissioners:

Charles B. Curtis, *Chairman;*
Georgiana Sheldon, Matthew Holden, Jr.,
and George R. Hall

SMALL POWER PRODUCTION AND COGENERATION FACILITIES—RATES AND EXEMPTIONS

Order No. 69

FINAL RULE REGARDING THE IMPLEMENTATION OF SECTION 210 OF THE PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978

(Issued February 19, 1980)

Section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA) requires the Federal Energy Regulatory Commission (Commission) to prescribe rules as the Commission determines necessary to encourage cogeneration and small power production, including rules requiring electric utilities to purchase electric power from and sell electric power to cogeneration and small power production facilities. Additionally, section 210 of PURPA authorizes the Commission to exempt qualifying facilities from certain Federal and State law and regulation.

Under section 201 of PURPA, cogeneration facilities and small power production facilities which meet certain standards and which are not owned by persons primarily engaged in the generation or sale of electric power can become qualifying facilities, and thus become eligible for the rates and exemptions set forth under section 210 of PURPA.

Cogeneration facilities simultaneously produce two forms of useful energy, such as electric power and steam. Cogeneration facilities use significantly less fuel to produce electricity and steam (or other forms of energy) than would be needed to produce the two separately. Thus, by using fuels more efficiently, cogeneration facilities can make a significant contribution to the Nation's effort to conserve its energy resources.

Small power production facilities use biomass, waste, or renewable resources, including wind, solar and water, to produce electric power. Reliance on these sources of energy can reduce the need to consume traditional fossil fuels to generate electric power.

Prior to the enactment of PURPA, a cogenerator or small power producer seeking to establish interconnected operation with a utility faced three major obstacles. First, a utility was not generally required to purchase the electric output, at an appropriate rate. Secondly, some utilities charged discriminatorily high rates for back-up service to cogenerators and small power producers. Thirdly, a cogenerator or small power producer which provided electricity to a utility's grid ran the risk of being considered an electric utility and thus being subjected to State and Federal regulation as an electric utility.

Sections 201 and 210 of PURPA are designed to remove these obstacles. Each electric utility is required under section 210 to offer to purchase available electric energy from cogeneration and small power production facilities which obtain qualifying status under section 201 of PURPA. For such purchases, electric utilities are required to pay rates which are just and reasonable to the ratepayers of the utility, in the public interest, and which do not discriminate against cogenerators or small power producers. Section 210 also requires electric utilities to provide electric service to qualifying facilities at rates

which are just and reasonable, in the public interest, and which do not discriminate against cogenerators and small power producers. Section 210(e) of PURPA provides that the Commission can exempt qualifying facilities from State regulation regarding utility rates and financial organization, from Federal regulation under the Federal Power Act (other than licensing under Part I), and from the Public Utility Holding Company Act.

I. PROCEDURAL HISTORY

On June 26, 1979, in Docket No. RM79-54,[1] the Commission issued proposed rules to determine which cogeneration and small power production facilities may become "qualifying" cogeneration or small power production facilities under section 201 PURPA. Such qualifying facilities are entitled to avail themselves of the rate and exemption provisions under section 210 of PURPA; and qualifying cogeneration facilities are eligible for exemption from incremental pricing under Title II of the Natural Gas Policy Act of 1978.[2] The Commission will soon issue a final rule in Docket No. RM79-54.

As part of the rulemaking process in this docket, the Commission issued a Staff Discussion Paper[3] on June 27, 1979, addressing issues arising under section 210 of PURPA.

Public hearings on RM79-54 and the Staff Discussion Paper (RM79-55) were held in San Francisco on July 23, 1979, Chicago on July 27, 1979, and Washington, D.C. on July 30, 1979. Written comments were also received.

On October 18, 1979, the Commission issued a Notice of Proposed Rulemaking under Section 210 of PURPA in Docket No. RM79-55.[4] On October 19, 1979, the Commission made available its preliminary Environmental Assessment (EA) of

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1 44 F.R. 38873, July 3, 1979.

2 44 F.R. 65744, November 15, 1979.

3 44 F.R. 38863, July 3, 1979.

4 44 F.R. 61190, October 24, 1979.

the proposed rules in Docket Nos. RM79-54 and RM79-55. In a Request for Further Comments[5], the Commission requested further public comment on both proposed rules, and on the findings set forth in the preliminary EA. In order to obtain the data, views, and arguments of interested parties, the Commission Staff held public hearings in Seattle on November 19, 1979, in New York on November 28, 1979, in Denver on November 30, 1979, and in Washington, D.C. on December 4 and 5, 1979. The Commission also received written comment.

After consideration of the comments, the Commission Staff made available a final draft rule on January 29, 1980. State public utility commissioners were invited to comment on the draft at a public meeting held on February 5, 1980. Representatives of electric utilities were invited to comment at a public meeting held on February 8, 1980. The Commission Staff also made itself available to any other interested parties who wished to comment. All of the comments were considered in the formulation of this final rule.

In the Staff Discussion Paper and the Request for Further Comments, it was stated that any environmental effects attributable to this program would result from the combined effect of these two rulemaking proceedings. As noted previously, the Commission intends to issue final rules in Docket No. RM79-54 in the near future. At that time, the Commission will also make available its final Environmental Assessment.

II. SUMMARY

These rules provide that electric utilities must purchase electric energy and capacity made available by qualifying cogenerators and small power producers at a rate reflecting the cost that the purchasing utility can avoid as a result of obtaining energy and capacity from these sources, rather than generating an equivalent amount of energy itself or purchasing the energy or capacity from other suppliers. To enable potential cogenerators and small power producers to be able to estimate these avoided costs, the rules require electric utilities

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5 44 F.R. 61977, October 29, 1979.

to furnish data concerning present and future costs of energy and capacity on their systems.

These rules also provide that electric utilities must furnish electric energy to qualifying facilities on a nondiscriminatory basis, and at a rate that is just and reasonable and in the public interest; and that they must provide certain types of service which may be requested by qualifying facilities to supplement or back up those facilities' own generation.

The rule exempts all qualifying cogeneration facilities and certain qualifying small power production facilities from certain provisions of the Federal Power Act, from all of the provisions of the Public Utility Holding Company Act of 1935 related to electric utilities, and from State laws regulating electric utility rates and financial organization.

The implementation of these rules is reserved to the State regulatory authorities and nonregulated electric utilities. Within one year of the issuance of the Commission's rules, each State regulatory authority or nonregulated utility must implement these rules. That implementation may be accomplished by the issuance of regulations, on a case-by-case basis, or by any other means reasonably designed to give effect to the Commission's rules.

III. SECTION-BY-SECTION ANALYSIS

SUBPART A—GENERAL PROVISIONS

§ 292.101 *Definitions.*

This section contains definitions applicable to this part of the Commission's rules. Paragraph (a) provides that terms defined in PURPA have the same meaning as they have in PURPA, unless further defined in this part of the Commission's regulations. The definitions in PURPA are found in section 3 of that Act.

Subparagraph (1) defines a qualifying facility as a cogeneration or small power production facility which is a qualifying facility under Subpart B of the Commission's regulations. Those regulations implement section 201 of PURPA, and are the subject of Docket No. RM79-54.

Subparagraph (2) defines "purchase" as the purchase of electric energy or capacity or both from a qualifying facility by an electric utility.

Subparagraph (3) defines "sale" as the sale of electric energy or capacity or both by an electric utility to a qualifying facility.

In the proposed rule, subparagraph (4) defined "system emergency" as a condition on a utility's system "which is likely to result in disruption of service to a significant number of customers or is likely to endanger life or property." In response to comments noting the difficulty in determining what constitutes a "significant number" of customers, the Commission has amended the definition to "a condition on an electric utility's system which is likely to result in imminent significant disruption of service to customers, or is imminently likely to endanger life or property." The emphasis is placed on the significance of the disruption of service, rather than on the number of customers affected.

Subparagraph (5) defines "rate" as any price, rate, charge, or classification made, demanded, observed or received with respect to the sale or purchase of electric energy or capacity, or any rule, regulation, or practice respecting any such rate, charge, or classification, and any contract pertaining to the sale or purchase of electric energy or capacity.

In the proposed rule, subparagraph (6) defined "avoided costs" as the costs to an electric utility of energy or capacity or both which, but for the purchase from a qualifying facility, the electric utility would generate or construct itself or purchase from another source. This definition is derived from the concept of "the incremental cost to the electric utility of alternative electric energy" set forth in section 210(d) of PURPA. It includes both the fixed and the running costs on an electric utility system which can be avoided by obtaining energy or capacity from qualifying facilities.

The costs which an electric utility can avoid by making such purchases generally can be classified as "energy" costs or "capacity" costs. Energy costs are the variable costs associated with the production of electric energy (kilowatt-hours). They represent the cost of fuel, and some operating and main-

tenance expenses. Capacity costs are the costs associated with providing the capability to deliver energy; they consist primarily of the capital costs of facilities.

If, by purchasing electric energy from a qualifying facility, a utility can reduce its energy costs or can avoid purchasing energy from another utility, the rate for a purchase from a qualifying facility is to be based on those energy costs which the utility can thereby avoid. If a qualifying facility offers energy of sufficient reliability and with sufficient legally enforceable guarantees of deliverability to permit the purchasing electric utility to avoid the need to construct a generating unit, to build a smaller, less expensive plant, or to reduce firm power purchases from another utility, then the rates for such a purchase will be based on the avoided capacity and energy costs.

The Commission has added the term "incremental" to modify the costs which an electric utility would avoid as a result of making a purchase from a qualifying facility. Under the principles of economic dispatch, utilities generally turn on last and turn off first their generating units with the highest running cost. At any given time, an economically dispatched utility can avoid operating its highest-cost units as a result of making a purchase from a qualifying facility. The utility's avoided incremental costs (and not average system costs) should be used to calculate avoided costs. With regard to capacity, if a purchase from a qualifying facility permits the utility to avoid the addition of new capacity, then the avoided cost of the new capacity and not the average embedded system cost of capacity should be used.

Many comments noted that the definition of "avoided cost" in the proposed rule failed to link the capacity costs which a utility might avoid as a result of purchasing electric energy or capacity or both from a qualifying facility with the energy costs associated with the new capacity. If the Commission required electric utilities to base their rates for purchases from a qualifying facility on the high capital or capacity cost of a base load unit and, in addition, provided that the rate for the avoided energy should be based on the high energy cost

associated with a peaking unit, the electric utilities' purchased power expenses would exceed the incremental cost of alternative electric energy, contrary to the limitation set forth in the last sentence of section 210(b).

One way of determining the avoided cost is to calculate the total (capacity and energy) costs that would be incurred by a utility to meet a specified demand in comparison to the cost that the utility would incur if it purchased energy or capacity or both from a qualifying facility to meet part of its demand, and supplied its remaining needs from its own facilities. The difference between these two figures would represent the utility's net avoided cost. In this case, the avoided costs are the excess of the total capacity and energy cost of the system developed in accordance with the utility's optimal capacity expansion plan,[6] *excluding* the qualifying facility, over the total capacity and energy cost of the system (before payment to the qualifying facility) developed in accordance with the utility's optimal capacity expansion plan *including* the qualifying facility.[7]

Subparagraph (7) defines "interconnection costs" as the reasonable costs of connection, switching, metering, transmission, distribution, safety provisions and administrative costs incurred by the electric utility directly related to the installation and maintenance of the physical facilities necessary to permit interconnected operations with a qualifying facility, to the extent such costs are in excess of the corresponding costs which the electric utility would have incurred if it had not engaged in interconnected operations, but instead generated an equivalent amount of energy itself or purchased an equivalent amount of electric energy or capacity from other sources. Interconnection

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6 An optimal capacity expansion plan is the schedule for the addition of new generating and transmission facilities which, based on an examination of capital, fuel, operating and maintenance costs, will meet a utility's projected load requirements at the lowest total cost.

7 Throughout the rule and preamble, the phrase "energy or capacity" is used. This phrase is intended to include the capacity and energy costs associated with the capacity, if the purchase involves both energy or capacity.

costs do not include any costs included in the calculation of avoided costs.

The Commission has clarified this definition to include distribution and administrative costs associated with the interconnected operation, in response to comments indicating that the proposed rule was vague in these respects. This definition is designed to provide the State regulatory authorities and nonregulated electric utilities with the flexibility to ensure that all costs which are shown to be reasonably incurred by the electric utility as a result of interconnection with the qualifying facility will be considered as part of the obligation of the qualifying facility under § 292.306. These costs may include, but are not limited to, operating and maintenance expenses, the costs of installation of equipment elsewhere on the utility's system necessitated by the interconnection, and reasonable insurance expenses. However, the Commission does not expect that litigation expenses incurred by the utility involving this section will be considered a legitimate interconnection cost to be borne by the qualifying facility.

Certain interconnection costs may be incurred as a result of sales from a utility to a qualifying facility. The Commission notes that the Joint Explanatory Statement of the Committee of Conference (Conference Report) prohibits the use of "unreasonable rate structure impediments, such as unreasonable hook up charges or other discriminatory practices . . ."[8] This prohibition is reflected in § 292.306(a) of these rules, which provides that interconnection costs must be assessed on a nondiscriminatory basis with respect to other customers with similar load characteristics.

A qualifying facility which is already interconnected with an electric utility for purposes of sales may seek to establish interconnection for the purpose of utility purchases from the qualifying facility. In this case, the qualifying facility may have compensated the utility for its interconnection costs with respect to sales to the qualifying facility, either as part of the utility's demand or energy charges, or through a separate

[8] Conference Report on H.R. 4018, Public Utility Regulatory Policies Act of 1978, H. Rep. No. 1750, 98, 95th Cong., 2d Sess. (1978).

customer charge. If this is the case, the interconnection costs associated with the purchase include only those additional interconnection expenses incurred by the electric utility as a result of the purchase, and do not include any portion of the interconnection costs for which the qualifying facility has already paid through its retail rates.

One comment recommended that the definition be revised to cover "all identifiable costs, including but not limited to, the costs of interconnection . . . resulting from interconnected operation". The Commission rejects this suggestion in order to maintain consistency with its initial determination to separate the utility's avoided costs with regard to purchases from qualifying facilities, from the costs incurred as a result of interconnection with a qualifying facility. Accordingly, legitimate costs not recovered pursuant to this section can be netted out in the calculation of avoided costs.

This definition also incorporates the concept from the proposed rule, as clarified in an erratum notice,[9] that these costs are limited to the net increased interconnection costs imposed on an electric utility compared to those interconnection costs it would have incurred had it generated the energy itself or purchased an equivalent amount of energy or capacity from another source.

This section of the rule contains definitions of "supplementary power", "back-up power", "interruptible power", and "maintenance power" which did not appear in the proposed rule.

Subparagraph (8) defines "supplementary power" as electric energy or capacity, supplied by an electric utility, regularly used by a qualifying facility in addition to that which the facility generates itself.

Subparagraph (9) defines "back-up power" as electric energy or capacity supplied by an electric utility to replace energy ordinarily generated by a facility's own generation equipment during an unscheduled outage of the fa ity.

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9 44 F.R. 63114, November 2, 1979.

Subparagraph (10) defines "interruptible power" as electric energy or capacity supplied by an electric utility subject to interruption by the electric utility under specified conditions.

Subparagraph (11) defines "maintenance power" as electric energy or capacity supplied by an electric utility during scheduled outages of the qualifying facility.

SUBPART C—ARRANGEMENTS BETWEEN ELECTRIC UTILITIES AND QUALIFYING COGENERATION AND SMALL POWER PRODUCTION FACILITIES UNDER SECTION 210 OF THE PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978

§ 292.301 *Scope.*

Section 292.301(a) describes the scope of Subpart C of Part 292 of the Commission's rules. Subpart C applies to sales and purchases of electric energy or capacity between qualifying cogeneration or small power production facilities and electric utilities, and actions related to such sales and purchases. Section 292.301(b)(1) provides that this subpart does not preclude negotiated agreements between qualifying cogenerators or small power producers and electric utilities which differ from rates, or terms or conditions which would otherwise be required under the subpart. Paragraph (b)(2) states that this subpart does not affect the validity of any contract entered into between a qualifying facility and an electric utility for any purchase.[10]

Paragraph (b)(1) reflects the Commission's view that the rate provisions of section 210 of PURPA apply only if a qualifying cogenerator or small power production facility chooses to avail itself of that section. Agreements between an electric utility and a qualifying cogenerator or small power producer for purchases at rates different than rates required by these rules, or under terms or conditions different from those set forth in

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10 The term "purchase" is defined in section 292.101(b).

these rules, do not violate the Commission's rules under section 210 of PURPA. The Commission recognizes that the ability of a qualifying cogenerator or small power producer to negotiate with an electric utility is buttressed by the existence of the rights and protections of these rules.

Some comments stated that paragraph (b)(2) would unfairly penalize cogenerators and small power producers who, prior to the promulgation of these regulations, entered into binding contracts with electric utilities under less favorable terms than might be obtainable under these rules. The Commission interprets its mandate under section 210(a) to prescribe "such rules as it determines necessary to encourage cogeneration and small power production . . . " to mean that the total costs to the utility and the rates to its other customers should not be greater than they would have been had the utility not made the purchase from the qualifying facility or qualifying facilities. That a cogeneration or small power production facility entered into a binding contractual arrangement with an electric utility indicates that it is likely that sufficient incentive existed, and that the further encouragement provided by these rules was not necessary. As a result, the Commission has not revised this provision.

§ 292.302 *Availability of electric utility system cost data.*

As the Commission observed in the Notice of Proposed Rulemaking, in order to be able to evaluate the financial feasibility of a cogeneration or small power production facility, an investor needs to be able to estimate, with reasonable certainty, the expected return on a potential investment before construction of a facility. This return will be determined in part by the price at which the qualifying facility can sell its electric output. Under § 292.304 of these rules, the rate at which a utility must purchase that output is based on the utility's avoided costs, taking into account the factors set forth in paragraph (e) of that section. Section § 292.302 of these rules is intended by the Commission to assist those needing data from which avoided costs can be derived. It requires electric utilities to make available to cogenerators and small power

producers data concerning the present and anticipated future costs of energy and capacity on the utility's system.

In the preamble to the proposed rule, the Commission stated that most electric utilities will have prepared data containing some of this information in compliance with the Commission's rules implementing section 133 of PURPA. Several commenters observed that the marginal cost data required to be provided pursuant to section 133 cannot be directly translated into a rate for purchases. The Commission has clarified paragraph (b) to emphasize that these data are not intended to represent a rate for purchases from qualifying facilities. Rather, these data are to be considered the first step in the determination of such a rate.

The Commission has also revised this section so that the rates for purchases can be more readily calculated from the data produced. The Commission has changed paragraph (b)(3) to provide that a utility shall submit the associated energy cost of each planned unit expressed in kilowatt-hours (kWh) along with the estimated capacity cost of planned capacity additions. This change is intended to ensure that the calculation of avoided costs includes the lower energy costs that might be associated with the new capacity. The Commission points out that the determination of a rate for purchases from a qualifying facility which enables a utility to defer or avoid the addition of a new unit must also reflect the hours of expected use of the deferred or avoided capacity addition.

The coverage under paragraph (a) of this section is the same as that provided pursuant to section 133 of PURPA and the Commission's rules implementing that section.[11] As noted in the Notice of Proposed Rulemaking, section 133 of PURPA applies to each electric utility whose total sales of electric energy for purposes other than resale exceeded 500 million kwh during any calendar year beginning after December 31, 1975, and before the immediately preceding calendar year.

Paragraph (b) provides that each regulated electric utility meeting the requirements of paragraph (a) must furnish to its

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11 44 F.R. 58687, October 11, 1979.

State regulatory authority, and maintain for public inspection, data related to the costs of energy and capacity on the electric utility's system. Each nonregulated electric utility also must maintain such data for public inspection.

In response to comments received, the Commission has extended the date by which these data must be first provided to November 1, 1980, and changed the second date to May 31, 1982, to conform to the dates required by the Commission's regulations implementing section 133 of PURPA. The Commission has added paragraph (d) to allow a State regulatory authority or nonregulated utility to use a different approach than that provided in paragraph (b). As part of that substitute program, a State regulatory authority or nonregulated electric utility could provide that cost data be updated more frequently than every two years.

Subparagraph (1) of paragraph (b) requires each electric utility to provide the estimated avoided cost of energy on its system for various levels of purchases from qualifying facilities. The levels of purchases are to be stated in blocks of not more than 100 megawatts for systems with peak demand of 1000 megawatts or more, and in blocks equivalent to not more than ten percent of system peak demand for sytems less than 1000 megawatts. This information is to be stated on a cents per kilowatt-hour basis, for daily and seasonal peak and off-peak periods, for the current calendar year and for each of the next five years.

Subparagraph (2) of paragraph (b) requires each electric utility to provide its schedule for the addition of capacity, planned purchases of firm energy and capacity, and planned capacity retirements for each of the next ten years.

Subparagraph (3) of paragraph (b) has been revised, as discussed previously, so that the costs of planned capacity additions include the associated energy costs.

The Commission received comment noting that some States have implemented or are planning to implement alternative methods by which electric utilities' system cost data would be made available. In order to prevent the preparation of duplicative data where the alternative method substantially deviates

from the Commission approach, the Commission has added paragraph (d). This paragraph provides that any State regulatory authority or nonregulated electric utility may, after providing public notice in the area served by the utility and after opportunity for public comment, require data different than that which are otherwise required by this section if it determines that avoided costs can be derived from such data. Any State regulatory authority or nonregulated utility shall notify the Commission within 30 days of any determination to substitute data requirements.

If a qualifying facility finds that the alternative requirements do not provide sufficient data from which avoided costs may be derived, the qualifying facility may seek court review of the matter as it can with regard to any other aspect of the State's implementation of this program.

A qualifying facility may wish to sell energy or capacity to an electric utility which is not subject to the reporting requirements of paragraph (b). In that event, paragraph (c) provides that, upon request of a qualifying facility, an electric utility not otherwise covered by paragraph (b) must provide data sufficient to enable the cogenerator or small power producer to estimate the utility's avoided costs. If such utility does not supply the requested data, the qualifying facility may apply to the State regulatory authority which has ratemaking authority over the utility or to this Commission for an order requiring that the information be supplied. The consideration of such applications should take into account the burden imposed on the small utilities.

An electric utility which is legally obligated to obtain all of its requirements for electric energy and capacity from another utility may provide the data provided by its supplying utility and the rates at which it currently purchases such energy and capacity for any period during which this obligation will continue. The wholesale rates may require adjustment in order to reflect properly the avoided costs. This is discussed later in this preamble under § 292.303. In the case of small, nongenerating utilities, the requirements of this section will be considered to have been satisfied if these cost data are readily available from the supplying utility.

Numerous comments mentioned that the proposed rule did not address the issue of validation of the data to be provided pursuant to this section. As a result, the Commission has added paragraph (e) which provides that any data submitted by an electric utility under this section shall be subject to review by its State regulatory authority. Paragraph (e)(2) places the burden of providing support for the data on the utility supplying the data.

§ 292.303 *Electric utility obligations under this subpart.*

Section 210(a) of PURPA provides that the Commission prescribe rules requiring electric utilities to offer to purchase electric energy from qualifying facilities. The Commission interprets this provision to impose on electric utilities an obligation to purchase all electric energy and capacity made available from qualifying facilities with which the electric utility is directly or indirectly interconnected, except during periods described in § 292.304(f) or during system emergencies.

A qualifying facility may seek to have a utility purchase more energy or capacity than the utility requires to meet its total system load. In such a case, while the utility is legally obligated to purchase any energy or capacity provided by a qualifying facility, the purchase rate should only include payment for energy or capacity which the utility can use to meet its total system load. These rules impose no requirement on the purchasing utility to deliver unusable energy or capacity to another utility for subsequent sale.

§ 292.303(a) *Obligation to purchase from qualifying facilities.*

§ 292.303(d) *Transmission to other electric utilities.*

All-Requirement Contracts

Several commenters noted that the obligation to purchase from qualifying facilities under this section might conflict with contractual commitments into which they had entered re-

quiring them to purchase all of their requirements from a wholesale supplier. One commenter noted that, with regard to all-requirements rural electric cooperatives, any impairment of the obligation to obtain all of a cooperative's requirements from a generation and transmission cooperative might affect the financing ability of the generation and transmission cooperative. The Commission observes that, in general, if it permitted such contractual provisions to override the obligation to purchase from qualifying facilities, these contractual devices might be used to hinder the development of cogeneration and small power production. The Commission believes that the mandate of PURPA to encourage cogeneration and small power production requires that obligations to purchase under this provision supersede contractual restrictions on a utility's ability to obtain energy or capacity from a qualifying facility.

The Commission has, however, provided an alternate means by which any electric utility can meet this obligation. Under paragraph (d), if the qualifying facility consents, an all-requirements utility which would otherwise be obligated to purchase energy or capacity from the qualifying facility would be permitted to transmit the energy or capacity to its supplying utility. In most instances, this transaction would actually take the form of the displacement of energy or capacity that would have been provided under the all-requirements obligation. In this case, the supplying utility is deemed to have made the purchase and, as a result, the all-requirements obligation is not affected.

In addition, if compliance with the purchase obligation would impose a special hardship on an all-requirements customer, the Commission may consider waiving such purchase obligation pursuant to the procedures set forth in § 292.403.

Transmission to Other Facilities

There are several circumstances in which a qualifying facility might desire that the electric utility with which it is interconnected not be the purchaser of the qualifying facility's energy and capacity, but would prefer instead that an electric utility

with which the purchasing utility is interconnected make such a purchase. If, for example, the purchasing utility is a non-generating utility, its avoided costs will be the price of bulk purchased power ordinarily based on the average embedded cost of capacity and average energy cost on its supplying utility's system. As a result, the rate to the qualifying facility would be based on those average costs. If, however, the qualifying facility's output were purchased by the supplying utility, its output ordinarily will replace the highest cost energy on the supplying utility's system at that time, and its capacity might enable the supplying utility to avoid the addition of new capacity. Thus, the avoided costs of the supplying utility may be higher than the avoided cost of the non-generating utility.

This would not appear to be the case if the qualifying facility offers to supply capacity and energy in a situation in which the supplying utility is in an excess capacity situation. Since the supplying utility has excess capacity, its avoided costs would include only energy costs. On the other hand, if the avoided cost were based on the wholesale rate to the all-requirements utility, the avoided cost would include the demand charge included in the wholesale rate, which would usually reflect an allocation of a portion of the fixed charges associated with excess capacity.

Use of the unadjusted wholesale rate fails to take into account the effect of reduced revenue to the supplying utility, as a result of the substitute of the qualifying facility's output for energy previously supplied by the supplying utility. As the level of purchase by the all-requirements utility decreases, the supplying utility's fixed costs will have to be allocated over a smaller number of units of output. In effect, the loss in revenue to the supplying utility will cause the demand charges to the supplying utility's customers (including the all-requirements customers interconnected with the qualifying facility) to increase. Under the definition of "avoided costs" in this section, the purchasing utility must be in the same financial position it would have been had it not purchased the qualifying facility's output. As a result, rather than allocating its loss in revenue among all of its customers, in this situation the

supplying utility should assign all of these losses to the all-requirements utility. That utility should, in turn, deduct these losses from its previously calculated avoided costs, and pay the qualifying facility accordingly.

Under these rules, certain small electric utilities are not required to provide system cost data, except upon request of a qualifying facility. If, with the consent of the qualifying facility, a small electric utility chooses to transmit energy from the qualifying facility to a second electric utility, the small utility can avoid the otherwise applicable requirements that it provide the system cost data for the qualifying facility and that it purchase the energy itself. However, the ability to transmit a purchase to another utility is not limited to these smaller systems; it applies to any utility.

Accordingly, paragraph (d) provides that a utility which receives energy or capacity from a qualifying facility may, with the consent of the qualifying facility, transmit such energy to another electric utility. However, if the first facility does not agree to transmit the purchased energy or capacity, it retains the purchase obligation. In addition, if the qualifying facility does not consent to transmission to another utility, the first utility retains the purchase obligation. Any electric utility to which such energy or capacity is delivered must purchase this energy under the obligations set forth in these rules as if the purchase were made directly from the qualifying facility.

One commenter stated that this provision could result in energy being transmitted to a utility which has little or no information regarding the reliability of the qualifying facility. The Commission believes that, prior to these transactions occurring, it will be in the interest of the qualifying facility to inform any utility to which energy or capacity is delivered, of the nature of those deliveries, so that such energy or capacity can be usefully integrated into that utility's power supply.

Several other commenters believed that this provision went beyond the authority of section 210 of PURPA—namely, that the Commission cannot require the first utility to wheel the power nor the second utility to buy the power. First, the Commission notes that this transmission can only occur with

the consent of the utility to which energy or capacity from the qualifying facility is made available. Thus, no utility is forced to wheel. Secondly, section 210 does not limit the obligation to purchase to any particular utility; rather, it is a generally applicable requirement.

Paragraph (d) provides that charges for transmission are not a part of the rate which an electric utility to which energy is transmitted is obligated to pay the qualifying facility. In the case of electric utilities not subject to the jurisdiction of this Commission, these charges should be determined under applicable State law or regulation which may permit agreement between the qualifying facility and any electric utility which transmits energy or capacity with the consent of the qualifying facility. For utilities subject to the Commission's jurisdiction under Part II of the Federal Power Act, these charges will be determined pursuant to Part II.

The electric utility to which the electric energy is transmitted has the obligation to purchase the energy at a rate which reflects the costs that it can avoid as a result of making such a purchase. In cases in which electricity actually travels across the transmitting utility's system, the amount of energy delivered will be less than that transmitted, due to line losses. When this occurs, the rate for purchase can reflect these losses. In other cases, the energy supplied by the qualifying facility will displace energy that would have been supplied by the purchasing utility to the transmitting utility. In those cases, a unit of energy supplied from the qualifying facility may replace a greater amount of energy from the purchasing utility. In that case, the rate for purchase should be increased to reflect the net gain. These provisions are also set forth in paragraph (d).

§ 292.303(b) *Obligation to sell to qualifying facilities.*

Paragraph (b) sets forth the statutory requirement of section 210(a) of PURPA that each electric utility offer to sell electric energy to qualifying facilities. The Commission observed in the Notice of Proposed Rulemaking that State law ordinarily sets out the obligation of an electric utility to provide service to

customers located within its service area. In most instances, therefore, this rule will not impose additional obligations on electric utilities.

It is possible that a qualifying facility located outside the service area of an electric utility might require back-up, maintenance, or other types of power. The Commission believes that the instructions of section 210(a) of PURPA that it issue rules "as it determines necessary to encourage cogeneration and small power production . . ." mandate that it assure that such facilities are able to fulfill their needs for service.

However, the Commission also recognizes that State and local law limits the authority of some electric utilities to construct lines outside of their service area. Accordingly, the Commission requires electric utilities to serve any qualifying facility, and, subject to the restriction contained therein, to interconnect with any such facility as required in paragraph (c). However, an electric utility is only required to construct lines or other facilities to the extent authorized or required by State or local law. As a result, a qualifying facility outside the service area of a utility may be required to build its line into the service area of the utility.

§ 292.303(c) *Obligation to interconnect.*

In the Notice of Proposed Rulemaking, the Commission used the interpretation set forth in the Staff Discussion Paper that the obligation to interconnect with a qualifying facility is subsumed within the requirement of section 210(a) that electric utilities offer to sell electric energy to and purchase electric energy from qualifying facilities. The Commission observed that to hold otherwise would mean that Congress intended to require that qualifying facilities go through the complex procedures simply to gain interconnection, contrary to the mandate of section 210 of PURPA to encourage cogeneration and small power production.

During the comment period, this question was further explored, and it was suggested that the Commission has ample authority under the general mandate of section 210(a) of

PURPA—namely, that it prescribe rules necessary to encourage cogeneration and small power production—to require interconnection.

While these interpretations received substantial support in the comments submitted, they were at the same time criticized on the theory that section 210(e)(3) of PURPA does not provide that a qualifying facility may be exempted from section 210 of the Federal Power Act (added by section 202 of PURPA and providing certain interconnection authority) and that this interconnection section specifically includes qualifying cogenerators and small power producers in its applicability. These commenters contended that since section 210 of the Federal Power Act deals explicitly with the subject of interconnections between qualifying facilities and electric utilities, no other section of that Act can be interpreted as also granting authority on that subject, as such an interpretation would render the express provision "surplusage".

With regard to these criticisms, the Commission observes that this argument might be tenable in the situation in which the section of the legislation which deals explicitly with the subject does not contain an express provision that it is *not* to be considered the exclusive authority on the subject. The Commission notes that section 212 of the Federal Power Act (as added by section 204 of PURPA) sets forth certain determinations that the Commission must make before it can issue an order under either section 210 or 211 of the Federal Power Act.

Section 212(e) states that no provision of section 210 of the Federal Power Act shall be treated "(1) as requiring any person to utilize the authority of such section 210 or 211 in lieu of any other authority of law, or (2) as limiting, impairing, or otherwise affecting any other authority of the Commission under any other provision of law." Thus, the Federal Power Act, as amended, expressly provides that the existence of authority under section 210 of the Federal Power Act to require interconnection is not to be interpreted as excluding any other interconnection authority available under any other law. The Commission emphasizes that the limitation is not

restricted to the Federal Power Act, but rather extends to include other authority of law, such as the authority contained in the Public Utility Regulatory Policies Act of 1978, of which section 210 is a part. Clearly, the existence of this provision refutes the contention that section 210 of the Federal Power Act represents the exclusive method by which interconnection can be obtained. As a result, the comment that the direction contained in section 210(e)(3) of PURPA that no qualifying facility can be exempted from section 210 or 212 of the Federal Power Act is not persuasive.

The Commission finds that to require qualifying facilities to go through the complex procedures set forth in section 210 of the Federal Power Act to gain interconnection would, in most circumstances, significantly frustrate the achievement of the benefits of this program. The Commission does not feel that the legal interpretation set forth in the Staff Discussion Paper and the Notice of Proposed Rulemaking is the exclusive theory by which it may require interconnections under this program without resort to sections 210 and 212 of the Federal Power Act. The interpretation brought out during the comment period—that section 210(a) of PURPA provides a general mandate for the Commission to prescribe rules necessary to encourage cogeneration and small power production—provides, in the Commission's view, sufficient authority to require interconnection. The Commission believes that a basic purpose of section 210 of PURPA is to provide a market for the electricity generated by small power producers and cogenerators. The Commission believes that accomplishment of this purpose would be greatly hindered if it were to require qualifying facilities to utilize section 210 of the Federal Power Act as the exclusive means of obtaining interconnection. It therefore concludes that such a restrictive interpretation of the law is not supportable.

Paragraph (c)(1) thus provides that an electric utility must make any interconnections with a qualifying facility which may be necessary to permit purchases from or sales to the qualifying facility. A State regulatory authority or nonregulated elec-

tric utility must enforce this requirement as part of its implementation of the Commission's rules.

In addition, several commenters contended that, if the obligation to interconnect is required under section 210(a) PURPA, the limitation provided in section 212 of the Federal Power Act would not be available. That limitation provides that an electric utility which complies with an interconnection order under section 210 of the Federal Power Act would not be subject to the jurisdiction of the Federal Energy Regulatory Commission for any purposes other than those specified in the interconnection order.

After consideration of this concern, the Commission has added paragraph (c)(2) to provide that no electric utility is required to interconnect with any qualifying facility, if, solely by reason of purchases or sales over the interconnection, the electric utility would become subject to regulation as a public utility under Part II of the Federal Power Act. This exception is provided because the Commission notes that, in balance, the encouragement of cogeneration and small power production would not be furthered if, by virtue of interconnection with a qualifying facility, a previously nonjurisdictional utility were reluctantly to become subject to federal utility regulation.

§ 292.303(e) *Parallel operation.*

In the Notice of Proposed Rulemaking, the Commission provided that each electric utility must offer to operate in parallel with a qualifying facility, provided that the qualifying facility complies with standards established by the State regulatory authority or nonregulated electric utility with regard to the protection of system reliability pursuant to § 292.308. By operating in parallel, qualifying facilities are enabled to export automatically any electric energy which is not consumed by its own load. The comments submitted have not set forth any convincing reasons for changing the proposed rule. Paragraph (e) thus continues to require each electric utility to offer to operate in parallel with a qualifying facility.

§ 292.304 *Rates for purchases.*

Section 210(b) of PURPA provides that in requiring any electric utility to purchase electric energy from a qualifying facility, the Commission must ensure that the rates for the purchase be just and reasonable to the electric consumers of the purchasing utility, in the public interest, and nondiscriminatory to qualifying facilities, but that they not exceed the incremental costs of alternative electric energy (the costs of energy to the utility, which, but for the purchase, the utility would generate itself or purchase from another source).

Relation to State Programs

The Commission has become aware that several States have enacted legislation requiring electric utilities in that State to purchase the electrical output of facilities which may be qualifying facilities under the Commission's rules at rates which may differ from the rates required under the Commission's rules implementing section 210 of PURPA.

This Commission has set the rate for purchases at a level which it believes appropriate to encourage cogeneration and small power production, as required by section 210 of PURPA. While the rules prescribed under section 210 of PURPA are subject to the statutory parameters, the States are free, under their own authority, to enact laws of regulations providing for rates which would result in even greater encouragement of these technologies. However, State laws or regulations which would provide rates lower than the federal standards would fail to provide the requisite encouragement of these technologies, and must yield to federal law.

If a State program were to provide that electric utilities must purchase power from certain types of facilities, among which are included "qualifying facilities," at a rate higher than that provided by these rules, a qualifying facility might seek to obtain the benefits of that State program. In such a case, however, the higher rates would be based on State authority to establish such rates, and not on the Commission's rules.

A facility which provides energy or capacity to a utility under State authority may nevertheless seek to obtain exemption from the Federal Power Act, the Public Utility Holding Company Act, and State regulation of electric utilities as available under section 210(e) of PURPA. The Commission notes that the States lack the authority to exempt a facility from the Federal Power Act or Public Utility Holding Company Act. The Commission finds no inconsistency in a facility's taking advantage of section 210 in order to obtain one of its benefits, while relying on other authority under which to buy from or sell to a utility.

§ 292.304(a) *Rates for purchases.*

Paragraph (a) sets forth the statutory requirement that rates for purchases be just and reasonable to the electric consumers of the electric utility and in the public interest, and not discriminate against qualifying cogeneration and small power production facilities.

In the proposed rule, the Commission stated that there is a rebuttable presumption that the rate for purchases is acceptable if it reflects the avoided cost resulting from a purchase on the basis of system cost data set forth pursuant to § 292.302(b) or (c). Many of the comments received stated that this section was ambiguous.[12] The Commission has therefore provided that the rate for purchases meets the statutory requirements if it equals avoided costs, and has eliminated the reference to the "rebuttable presumption".

Some comments recommended that, as a matter of policy, this section be revised to provide that a State regulatory authority or nonregulated utility has discretion to establish the relationship between the avoided cost and the rate for purchases. Other commenters contended that the Commission should specify that the rate for purchase must equal the avoided cost resulting from such a purchase. In addition,

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12 The relationship between the utility system cost data and the rate for purchases is discussed under § 292.302 and § 292.304(b).

several suggested that the Commission adopt a "split-the-savings" approach.

It is possible that developers of technologies which may be included as qualifying facilities may produce and make available power to electric facilities even though their cost of producing this power is greater than the utility's avoided costs. In most instances, however, purchases of energy or capacity from qualifying facilities will only occur when the cost to the qualifying cogenerator or small power producer of producing the energy or capacity is lower than the utility's avoided costs. Only if this is the case will payment by the utility of its avoided costs provide economic benefit for the cogenerator or small power producer.

When one electric utility can provide energy more cheaply than could another electric utility, the two utilities will often exchange power on a "split-the-savings" basis. In that type of transaction, the two utilities split the difference between the incremental costs incurred and the incremental costs that the purchasing utility would have incurred had it generated the power itself. Several commenters argued that rates for purchases from qualifying facilities should be based upon this same general principle. The effect of such a pricing mechanism would be to transfer to the utility's ratepayers a portion of the savings represented by the cost differential between the qualifying facility and the purchasing electric utility. Several utilities contend that by so allocating these savings, the Commission would provide an incentive for the electric utility to enter into purchase transactions with qualifying cogeneration and small power production facilities.

These commenters also noted that they had previously engaged in purchases from facilities which might become qualifying facilities under the Commission's rules, and they had paid prices for these purchases based on a "split-the-savings" methodology. These commenters observed that if the Commission's rules now require the payment of full avoided cost for these types of purchases, the purchased power expenses of the electric utility would increase.

Moreover, several utilities commented that, for the forseeable future, they are inextricably tied to the use of oil to produce electricity. They contend that unless they are permitted to purchase energy and capacity from qualifying facilities at a rate somewhere between the qualifying facilities' costs and their own costs, they and their ratepayers will be subject to the continually increasing world price of oil.

Commenters opposing this allocation of savings to parties other than the qualifying facility noted that this section of PURPA is intended to encourage the development of cogeneration and small power production. They noted that in providing for this encouragement, the Commission may not set rates for purchases at a level which exceeds the incremental cost of alternative energy. Therefore, they observed that, under the full avoided cost standard, the utilities' customers are kept whole, and pay the same rates as they would have paid had the utility not purchased energy and capacity from the qualifying facility.

Although use of the full avoided cost standard will not produce any rate savings to the utility's customers, several commenters stated that these ratepayers and the nation as a whole will benefit from the decreased reliance on scarce fossil fuels, such as oil and gas, and the more efficient use of energy.

The Commission notes that, in most instances, if part of the savings from cogeneration and small power production were allocated among the utilities' ratepayers, any rate reductions will be insignificant for any individual customer. On the other hand, if these savings are allocated to the relatively small class of qualifying cogenerators and small power producers, they may provide a significant incentive for a higher growth rate of these technologies.

Another concern with the use of a split-the-savings rate for purchases is that it would require a determination of the costs of production of the qualifying facility. A major portion of this legislation is intended to exempt qualifying facilities from the cost-of-service regulation by which electric utilities traditionally have been regulated. The Conference Report noted that:

> It is not the intention of the Conferees that cogenerators and small power producers become subject . . . to the type of examination that is traditionally given to electric utility rate applications to determine what is the just and reasonable rate that they should receive for their electric power.[13]

Thus, section 210(e) of PURPA provides that the Commission shall exempt qualifying facilities from the Public Utility Holding Company Act, from the Federal Power Act and from State law and regulation respecting utility rates or financial organization, to the extent that the Commission determines that such exemption is necessary to encourage cogeneration or small power production.

Several commenters have contended that a determination of the qualifying facility's costs can be made without the detail required by cost-of-service regulation. However, the Commission believes that the basis for the determination of rates for purchases should be the utility's avoided costs and should not vary on the basis of the costs of the particular qualifying facility.

Several commenters recommended that rather than using a split-the-savings approach, the Commission should set rates for purchases at a fixed percentage of avoided costs. The Commission notes that, in most situations, a qualifying cogenerator or small power producer will only produce energy if its marginal cost of production is less than the price he receives for its output. If some fixed percentage is used, a qualifying facility may cease to produce additional units of energy when its costs exceed the price to be paid by the utility. If this occurs, the utility will be forced to operate generating units which either are less efficient than those which would have been used by the qualifying facility, or which consume fossil fuel rather than the alternative fuel which would have been consumed by the qualifying facility had the price been set at full avoided costs.

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13 Conference Report on H.R. 4018, Public Utility Regulatory Policies Act of 1978, H. Rep. No. 1750, 97, 95th Cong., 2d. Sess. (1978).

§ 292.304(b) *Relationship to avoided costs.*

"New Capacity"

The proposed rule differentiated between "old" and "new" production in connection with simultaneous purchases and sales. The proposed rule required an electric utility to purchase at its avoided cost the total output of a facility, construction of which was commenced after the date of issuance of these rules, even if the utility simultaneously sells energy to the facility at its retail rate. The effect of this proposed rule was to separate the production aspect of a qualifying facility from its consumption function. Under this approach, the electrical output of a facility is viewed independently of its electrical needs. Thus, if a cogeneration facility produces five megawatts, and consumes three megawatts, it is treated the same as another qualifying facility that produces five megawatts, and that is located next to a factory that uses three megawatts.

The Commission continues to believe that permitting simultaneous purchase and sale is necessary and appropriate to encourage cogeneration and small power production. The limitation contained in the proposed rule was intended to prevent a cogenerator or small power producer, which had found it economical to produce power for its own consumption prior to the issuance of these rules, from receiving the economic rent that might result from the purchase of its entire output at a utility's full avoided cost after that date without new investment on the part of the qualifying facility.

The same reasoning applies to any facility which was in existence prior to the enactment of PURPA, whether or not it seeks to purchase and sell simultaneously. That construction of the facility was commenced prior to that date may indicate that appropriate economic returns were available without the further incentives provided by section 210.

The Commission is aware that in some instances, if a previously existing qualifying facility were not permitted to receive full avoided costs for its entire output, it would no

longer have sufficient incentive to continue to produce electric power. The cost of production may have risen so as to render the previous rate insufficient to cover the costs of production, or permit an appropriate return.

Thus, with regard to facilities, construction of which commenced on or after the date of enactment of PURPA (November 9, 1978), the Commission has determined it appropriate to provide that rates for purchases shall equal full avoided costs. For facilities, construction of which commenced before the enactment of PURPA, the Commission will permit the State regulatory authorities and nonregulated electric utilities to establish rates for purchases at full avoided costs, or at a lower rate, if the State regulatory authority or nonregulated electric utility determines that the lower rate will provide sufficient encouragement of cogeneration and small power production. Thus, if a previously existing facility shows that it requires rates for purchases based on full avoided costs to remain viable, or to increase its output, the State regulatory authority or nonregulated electric utility is required to establish such rates. This distinction is intended to reflect the need for further incentives and the reasonable expectations of persons investing in cogeneration or small power production facilities prior to or subsequent to the enactment of this law.

Paragraph (b)(1) defines "new capacity" as any purchase of capacity from a qualifying facility, construction of which was commenced on or after November 9, 1978. Subparagraph (2) provides that for new capacity, utilities must pay a rate which equals their avoided cost.

A utility must therefore purchase all of the output from a qualifying facility. However, as explained above, for any portion of that output which is not "new capacity," the State regulatory authority or nonregulated electric utility, as provided in paragraph (b)(3), may provide for a lower rate, if it determines that the lower rate will provide sufficient incentive for cogeneration.

Paragraph (b)(4) requires electric utilities to pay full avoided costs for purchases from new capacity made available from a

qualifying facility, regardless of whether the electric utility is simultaneously making sales to the qualifying facility.

§ 292.304(c) *Standard rates for purchases.*

The Notice of Proposed Rulemaking required electric utilities on request of a qualifying facility to establish a tariff or other method for establishing rates for purchase from qualifying facilities of 10 kw or less. Upon consideration of the comments received, the Commission has determined that the concept of requiring a standard rate for purchases should be retained. Several comments stated that this requirement could similarly be applied to facilities of up to 100 kw or less.

The Commission is aware that the supply characteristics of a particular facility may vary in value from the average rates set forth in the utility's standard rate required by this paragraph. If the Commission were to require individualized rates, however, the transaction costs associated with administration of the program would likely render the program uneconomic for this size of qualifying facility. As a result, the Commission will require that standardized tariffs be implemented for facilities of 100 kW or less.

In addition, some commenters pointed out that standard tariffs can be used on a technology specific basis, to reflect the supply characteristics of the particular technology. Some commenters also observed that the proposed rule did not require that standard rates for purchases from these small facilities be based on the purchasing utility's avoided cost. This omission might have permitted a utility to pay less than that rate for purchases.

The Commission has accordingly revised paragraph (c) to require each State regulatory authority or nonregulated electric utility to cause to be put into effect standard rates for purchases from qualifying facilities with a design capacity of 100 kilowatts or less. The revised rule requires that standard rates for purchases equal the purchasing utility's avoided cost pursuant to paragraphs (a), (b), and (e).

Several commenters noted that standard rates for purchases can also be usefully applied to larger facilities. The Commission believes that the establishment of standard rates for purchases can significantly encourage cogeneration and small power production, provided that these standard rates accurately reflect the costs that the utility can avoid as a result of such purchases. Accordingly, the Commission has added subparagraph (2) which permits, but does not require, State regulatory authorities and nonregulated electric utilities to put into effect a standard rate for purchases from qualifying facilities with a design capacity greater than 100 kilowatts. These rates must equal avoided cost pursuant to paragraphs (a), (b), and (e).

Many commenters at the Commission's public hearings and in written comments recommended that the Commission should require the establishment of "net energy billing" for small qualifying facilities. Under this billing method, the output from a qualifying facility reverses the electric meter used to measure sales from the electric utility to the qualifying facility. The Commission believes that this billing method may be an appropriate way of approximating avoided cost in some circumstances, but does not believe that this is the only practical or appropriate method to establish rates for small qualifying facilities. The Commission observes that net energy billing is likely to be appropriate when the retail rates are marginal cost-based, time-of-day rates. Accordingly, the Commission will leave to the State regulatory authorities and the nonregulated electric utilities the determination as to whether to institute net energy billing.

Paragraph (c)(3)(i) provides that standard rates for purchase should take into account the factors set forth in paragraph (e). These factors relate to the quality of power from the qualifying facility, and its ability to fit into the purchasing utility's generating mix.

Paragraph (e)(vi) is of particular significance for facilities of 100 kW or less. This paragraph provides that rates for purchase shall take into account "the individual and aggregate value of energy and capacity from qualifying facilities on the electric

utility's system . . .". Several commenters presented persuasive evidence showing that an effective amount of capacity may be provided by dispersed small systems, even in the case where delivery of energy from any particular facility is stochastic. Similarly, qualifying facilities may be able to enter into operating agreements with each other by which they are able to increase the assured availability of capacity to the utility by coordinating scheduled maintenance and providing mutual back-up service. To the extent that this aggregate capacity value can be reasonably estimated, it must be reflected in standard rates for purchases.

Several commenters observed that the patterns of availability of particular energy sources can and should be reflected in standard rates. An example of this phenomenon is the availability of wind and photovoltaic energy on a summer peaking system. If it can be shown that system peak occurs when there is bright sun and no wind, rates for purchase could provide a higher capacity payment for photovoltaic cells than for wind energy conversion systems. For systems peaking on dark windy days, the reverse might be true. Subparagraph (3)(ii) thus provides that standard rates for purchases may differentiate among qualifying facilities on the basis of the supply characteristics of the particular technology.

§§ 292.304(b)(5) and (d) *Legally enforceable obligations.*

Paragraphs (b)(5) and (d) are intended to reconcile the requirement that the rates for purchases equal the utilities' avoided cost with the need for qualifying facilities to be able to enter into contractual commitments based, by necessity, on estimates of future avoided costs. Some of the comments received regarding this section stated that, if the avoided cost of energy at the time it is supplied is less than the price provided in the contract or obligation, the purchasing utility would be required to pay a rate for purchases that would subsidize the qualifying facility at the expense of the utility's other ratepayers. The Commission recognizes this possibility, but is cognizant that in other cases, the required rate will turn

out to be lower than the avoided cost at the time of purchase. The Commission does not believe that the reference in the statute to the incremental cost of alternative energy was intended to require a minute-by-minute evaluation of costs which would be checked against rates established in long term contracts between qualifying facilities and electric utilities.

Many commenters have stressed the need for certainty with regard to return on investment in new technologies. The Commission agrees with these latter arguments, and believes that, in the long run, "overestimations" and "underestimations" of avoided costs will balance out.

Paragraph (b)(5) addresses the situation in which a qualifying facility has entered into a contract with an electric utility, or where the qualifying facility has agreed to obligate itself to deliver at a future date energy and capacity to the electric utility. The import of this section is to ensure that a qualifying facility which has obtained the certainty of an arrangement is not deprived of the benefits of its commitment as a result of changed circumstances. This provision can also work to preserve the bargain entered into by the electric utility; should the actual avoided cost be higher than those contracted for, the electric utility is nevertheless entitled to retain the benefit of its contracted for, or otherwise legally enforceable, lower price for purchases from the qualifying facility. This subparagraph will thus ensure the certainty of rates for purchases from a qualifying facility which enters into a commitment to deliver energy or capacity to a utility.

Paragraph (d)(1) provides that a qualifying facility may provide energy or capacity on an "as available" basis, i.e. without a legal obligation. The proposed rule provided that rates for such purchases should be based on "actual" avoided costs. Many comments noted that basing rates for purchases in such cases on the utility's "actual avoided costs" is misleading and could require retroactive ratemaking. In light of these comments, the Commission has revised the rule to provide that the rates for purchases are to be based on the purchasing utility's avoided costs estimated at the time of delivery.[14]

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14 In addition to the avoided costs of energy, these costs must include the prorated share of the aggregate capacity value of such facilities.

Paragraph (d)(2) permits a qualifying facility to enter into a contract or other legally enforceable obligation to provide energy or capacity over a specified term. Use of the term "legally enforceable obligation" is intended to prevent a utility from circumventing the requirement that provides capacity credit for an eligible qualifying facility merely by refusing to enter into a contract with the qualifying facility.

Many commenters noted the same problems for establishing rates for purchases under subparagraph (2) as in subparagraph (1). The Commission intends that rates for purchases be based, at the option of the qualifying facility, on either the avoided costs at the time of delivery or the avoided costs calculated at the time the obligation is incurred. This change enables a qualifying facility to establish a fixed contract price for its energy and capacity at the outset of its obligation or to receive the avoided costs determined at the time of delivery.

A facility which enters into a long term contract to provide energy or capacity to a utility may wish to receive a greater percentage of the total purchase price during the beginning of the obligation. For example, a level payment schedule from the utility to the qualifying facility may be used to match more closely the schedule of debt service of the facility. So long as the total payment over the duration of the contract term does not exceed the estimated avoided costs, nothing in these rules would prohibit a State regulatory authority or non-regulated electric utility from approving such an arrangement.

§ 292.304(c) *Factors affecting rates for purchases.*

Capacity Value

An issue basic to this paragraph is the question of recognition of the capacity value of qualifying facilities.

In the proposed rule, the Commission adopted the argument set forth in the Staff Discussion Paper that the proper interpretation of section 210(b) of PURPA requires that the rates for purchases include recognition of the capacity value provided by qualifying cogeneration and small power production facilities. The Commission noted that language used in section 210

of PURPA and the Conference Report as well as in the Federal Power Act supports this proposition.

In the proposed rule, the Commission cited the final paragraph of the Conference Report with regard to section 210 of PURPA:

> The conferees expect that the Commission, in judging whether the electric power supplied by the cogenerator or small power producer will replace future power which the utility would otherwise have to generate itself either through existing capacity or additions to capacity or purchase from other sources, will take into account the reliability of the power supplied by the cogenerator or small power producer by reason of any legally enforceable obligation of such cogenerator or small power producer to supply firm power to the utility.[15]

In addition to that citation, the Commission notes that the Conference Report states that:

> In interpreting the term "incremental costs of alternative energy", the conferees expect that the Commission and the States may look beyond the costs of alternative sources which are instantaneously available to the utility.[16]

Several commenters contended that, since section 210(a)(2) of PURPA provides that electric utilities must "purchase electric energy" from qualifying facilities, the rate for such purchases should not include payments for capacity. The Commission observes that the statutory language used in the Federal Power Act uses the term "electric energy" to describe the rates for sales for resale in interstate commerce. Demand or capacity payments are a traditional part of such rates. The term "electric energy" is used throughout the Act to refer both to electric energy and capacity. The Commission does not find any

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15 Conference Report on H.R. 4018, Public Utility Regulatory Policies Act of 1978, H. Rep. No. 1750, 99, 95th Cong., 2d. Sess. (1978).

16 *Id.*, pp. 98-9.

evidence that the term "electric energy" in section 210 of PURPA was intended to refer only to fuel and operating and maintenance expenses, instead of all of the costs associated with the provision of electric service.

In addition, the Commission notes that to interpret this phrase to include only energy would lead to the conclusion that the rates for sales *to* qualifying facilities could only include the energy component of the rate since section 210 also refers to "electric energy" with regard to such sales. It is the Commission's belief that this was not the intended result. This provides an additional reason to interpret the phrase electric energy to include both energy and capacity.

In implementing this statutory standard, it is helpful to review industry practice respecting sales between utilities. Sales of electric power are ordinarily classified as either firm sales, where the seller provides power at the customer's request, or non-firm power sales, where the seller and not the buyer makes the decision whether or not power is to be available. Rates for firm power purchases include payments for the cost of fuel and operating expenses, and also for the fixed costs associated with the construction of generating units needed to provide power at the purchaser's discretion. The degree of certainty of deliverability required to constitute "firm power" can ordinarily be obtained only if a utility has several generating units and adequate reserve capacity. The capacity payment, or demand charge, will reflect the cost of the utility's generating units.

In contrast, the ability to provide electric power at the selling utility's discretion imposes no requirement that the seller construct or reserve capacity. In order to provide power to customers at the seller's discretion, the selling utility need only charge for the cost of operating its generating units and administration. These costs, called "energy" costs, ordinarily are the ones associated with non-firm sales of power.

Purchases of power from qualifying facilities will fall somewhere on the continuum between these two types of electric service. Thus, for example, wind machines that furnish power only when wind velocity exceeds twelve miles per hour may be so uncertain in availability of output that they would only

permit a utility to avoid generating an equivalent amount of energy. In that situation, the utility must continue to provide capacity that is available to meet the needs of its customers. Since there are no avoided capacity costs, rates for such sporadic purchases should thus be based on the utility system's avoided incremental cost of energy. On the other hand, testimony at the Commission's public hearings indicated that effective amounts of firm capacity exist for dispersed wind systems, even though each machine, considered separately, could not provide capacity value. The aggregate capacity value of such facilities must be considered in the calculation of rates for purchases, and the payment distributed to the class providing the capacity.

Some technologies, such as photovoltaic cells, although subject to some uncertainty in power output, have the general advantage of providing their maximum power coincident with the system peak when used on a summer peaking system. The value of such power is greater to the utility than power delivered during off-peak periods. Since the need for capacity is based, in part, on system peaks, the qualifying facility's coincidence with the system peak should be reflected in the allowance of some capacity value and an energy component that reflects the avoided energy costs at the time of the peak.

A facility burning municipal waste or biomass may be able to operate more predictably and reliably than solar or wind systems. It can schedule its outages during times when demand on the utility's system is low. If such a unit demonstrates a degree of reliability that would permit the utility to defer or avoid construction of a generating unit or the purchase of firm power from another utility, then the rate for such a purchase should be based on the avoidance of both energy and capacity costs.

In order to defer or cancel the construction of new generating units, a utility must obtain a commitment from a qualifying facility that provides contractual or other legally enforceable assurances that capacity from alternative sources will be available sufficiently ahead of the date on which the utility would otherwise have to commit itself to the construction or purchase of new capacity. If a qualifying facility provides such

assurances, it is entitled to receive rates based on the capacity costs that the utility can avoid as a result of its obtaining capacity from the qualifying facility.

Other comments with regard to the requirement to include capacity payments in avoided costs generally track those set forth in the Staff Discussion Paper and the proposed rule. The thrust of these comments is that, in order to receive credit for capacity and to comply with the requirement that rates for purchases not exceed the incremental cost of alternative energy, capacity payments can only be required when the availability of capacity from a qualifying facility or facilities actually permits the purchasing utility to reduce its need to provide capacity by deferring the construction of new plant or commitments to firm power purchase contracts. In the proposed rule, the Commission stated that if a qualifying facility offers energy of sufficient reliability and with sufficient legally enforceable guarantees of deliverability to permit the purchasing electric utility to avoid the need to construct a generating plant, to enable it to build a smaller, less expensive plant, or to purchase less firm power from another utility than it would otherwise have purchased, then the rates for purchases from the qualifying facility must include the avoided capacity and energy costs. As indicated by the preceding discussion, the Commission continues to believe that these principles are valid and appropriate, and that they properly fulfill the mandate of the statute.

The Commission also continues to believe, as stated in the proposed rule, that this rulemaking represents an effort to evolve concepts in a newly developing area within certain statutory constraints. The Commission recognizes that the translation of the principle of avoided capacity costs from theory into practice is an extremely difficult exercise, and is one which, by definition, is based on estimation and forecasting of future occurrences. Accordingly, the Commission supports the recommendation made in the Staff Discussion Paper that it should leave to the States and nonregulated utilities "flexibility for experimentation and accommodation of special circumstances" with regard to implementation of rates for

purchases. Therefore, to the extent that a method of calculating the value of capacity from qualifying facilities reasonably accounts for the utility's avoided costs, and does not fail to provide the required encouragement of cogeneration and small power production, it will be considered as satisfactorily implementing the Commission's rules.

§ 292.304(e) *Factors affecting rates for purchases.*

As noted previously, several commenters observed that the utility system cost data required under § 292.302 cannot be directly applied to rates for purchase. The Commission acknowledges this point and, as discussed previously, has provided that these data are to be used as a starting point for the calculation of an appropriate rate for purchases equal to the utility's avoided cost. Accordingly, the Commission has removed the reference to the utility system cost data from the definition of rates for purchases, and has inserted the reference to these data in paragraph (e), as one factor to be considered in calculating rates for purchases. Subparagraph (1) states that these data shall, to the extent practicable, be taken into account in the calculation of a rate for purchases.

Subparagraph (2) deals with the availability of capacity from a qualifying facility during system daily and seasonal peak periods. If a qualifying facility can provide energy to a utility during peak periods when the electric utility is running its most expensive generating units, this energy has a higher value to the utility than energy supplied during off-peak periods, during which only units with lower running costs are operating.

The preamble to the proposed rule provided that, to the extent that metering equipment is available, the State regulatory authority or nonregulated electric utility should take into account the time or season in which the purchase from the qualifying facility occurs. Several commenters interpreted this statement as implying that, by refusing to install metering equipment, an electric utility could avoid the obligation to consider the time at which purchases occur. This is not the intent of this provision. Clearly, the more precisely the time of

purchase is recorded the more exact the calculation of the avoided costs, and thus the rate for purchases, can be. Rather than specifying that exact time-of-day or seasonal rates for purchases are required, however, the Commission believes that the selection of a methodology is best left to the State regulatory authorities and nonregulated electric utilities charged with the implementation of these provisions.

Clauses (i) through (v) concern various aspects of the reliability of a qualifying facility. When an electric utility provides power from its own generating units or from those of another electric utility, it normally controls the production of such power from a central location. The ability to so control power production enhances a utility's ability to respond to changes in demand, and thereby enhances the value of that power to the utility. A qualifying facility may be able to enter into an arrangement with the utility which gives the utility the advantage of dispatching the facility. By so doing, it increases its value to the utility. Conversely, if a utility cannot dispatch a qualifying facility, that facility may be of less value to the utility.

Clause (ii) refers to the expected or demonstrated reliability of a qualifying facility. A utility cannot avoid the construction or purchase of capacity if it is likely that the qualifying facility which would claim to replace such capacity may go out of service during the period when the utility needs its power to meet system demand. Based on the estimated or demonstrated reliability of a qualifying facility, the rate for purchases from a qualifying facility should be adjusted to reflect its value to the utility.

Clause (iii) refers to the length of time during which the qualifying facility has contractually or otherwise guaranteed that it will supply energy or capacity to the electric utility. A utility-owned generating unit normally will supply power for the life of the plant, or until it is replaced by more efficient capacity. In contrast, a cogeneration or small power production unit might cease to produce power as a result of changes in the industry or in the industrial processes utilized. Accordingly, the value of the service from the qualifying facility to the

electric utility may be affected by the degree to which the qualifying facility ensures by contract or other legally enforceable obligation that it will continue to provide power. Included in this determination, among other factors, are the term of the commitment, the requirement for notice prior to termination of the commitment, and any penalty provisions for breach of the obligation.

In order to provide capacity value to an electric utility a qualifying facility need not necessarily agree to provide power for the life of the plant. A utility's generation expansion plans often include purchases of firm power from other utilities in years immediately preceding the addition of a major generation unit. If a qualifying facility contracts to deliver power, for example, for a one year period, it may enable the purchasing utility to avoid entering into a bulk power purchase arrangement with another utility. The rate for such a purchase should thus be based on the price at which such power is purchased, or can be expected to be purchased, based upon bona fide offers from another utility.

Clause (iv) addresses periods during which a qualifying facility is unable to provide power. Electric utilities schedule maintenance outages for their own generating units during periods when demand is low. If a qualifying facility can similarly schedule its maintenance outages during periods of low demand, or during periods in which a utility's own capacity will be adequate to handle existing demand, it will enable the utility to avoid the expenses associated with providing an equivalent amount of capacity. These savings should be reflected in the rate for purchases.

Clause (v) refers to a qualifying facility's ability and willingness to provide capacity and energy during system emergencies. Section 292.307 of these regulations concerns the provision of electric service during system emergencies. It provides that, to the extent that a qualifying facility is willing to forego its own use of energy during system emergencies and provide power to a utility's system, the rate for purchases from the qualifying facility should reflect the value of that service. Small power production and cogeneration facilities could provide signifi-

cant back-up capability to electric systems during emergencies. One benefit of the encouragement of interconnected cogeneration and small power production may be to increase overall system reliability during such emergency conditions. Any such benefit should be reflected in the rate for purchases from such qualifying facilities.

Another related factor which affects the capacity value of a qualifying facility is its ability to separate its load from its generation during system emergencies. During such emergencies an electric utility may institute load shedding procedures which may, among other things, require that industrial customers or other large loads stop receiving power. As a result, to provide optimal benefit to a utility in an emergency situation, a qualifying facility might be required to continue operation as a generating plant, while simultaneously ceasing operation as a load on the utility's system. To the extent that a facility is unable to separate its load from its generation, its value to the purchasing utility decreases during system emergencies. To reflect such a possibility, clause (v) provides that the purchasing utility may consider the qualifying facility's ability to separate its load from its generation during system emergencies in determining the value of the qualifying facility to the electric utility.

Clause (vi) refers to the aggregate capability of capacity from qualifying facilities to displace planned utility capacity. In some instances, the small amounts of capacity provided from qualifying facilities taken individually might not enable a purchasing utility to defer or avoid scheduled capacity additions. The aggregate capability of such purchases may, however, be sufficient to permit the deferral or avoidance of a capacity addition. Moreover, while an individual qualifying facility may not provide the equivalent of firm power to the electric utility, the diversity of these facilities may collectively comprise the equivalent of capacity.

Clause (vii) refers to the fact that the lead time associated with the addition of capacity from qualifying facilities may be less than the lead time that would have been required if the purchasing utility had constructed its own generating unit.

Such reduced lead time might produce savings in the utility's total power production costs, by permitting utilities to avoid the "lumpiness," and temporary excess capacity associated therewith, which normally occur when utilities bring on line large generating units. In addition, reduced lead time provides the utility with greater flexibility with which it can accommodate changes in forecasts of peak demand.

Subparagraph (3) concerns the relationship of energy or capacity from a qualifying facility to the purchasing electric utility's need for such energy or capacity. If an electric utility has sufficient capacity to meet its demand, and is not planning to add any new capacity to its system, then the availability of capacity from qualifying facilities will not immediately enable the utility to avoid any capacity costs. However, an electric utility system with excess capacity may nevertheless plan to add new, more efficient capacity to its system. If purchases from qualifying facilities enable a utility to defer or avoid these new planned capacity additions, the rate for such purchases should reflect the avoided costs of these additions. However, as noted by several commenters, the deferral or avoidance of such a unit will also prevent the substitution of the lower energy costs that would have accompanied the new capacity. As a result, the price for the purchase of energy and capacity should reflect these lower avoided energy costs that the utility would have incurred had the new capacity been added.

This is not to say that electric utilities which have excess capacity need not make purchases from qualifying facilities; qualifying facilities may obtain payment based on the avoided energy costs on a purchasing utility's system. Many utility systems with excess capacity have intermediate or peaking units which use high-cost fossil fuel. As a result, during peak hours, the energy costs on the systems are high, and thus the rate to a qualifying utility from which the electric utility purchases energy should similarly be high.

Subparagraph (4) addresses the costs or savings resulting from line losses. An appropriate rate for purchases from a qualifying facility should reflect the cost savings actually accruing to the electric utility. If energy produced from a qualify-

ing facility undergoes line losses such that the delivered power is not equivalent to the power that would have been delivered from the source of power it replaces, then the qualifying facility should not be reimbursed for the difference in losses. If the load served by the qualifying facility is closer to the qualifying facility than it is to the utility, it is possible that there may be net savings resulting from reduced line losses. In such cases, the rates should be adjusted upwards.

§ 292.303(f) *Periods during which purchase are not required.*

The proposed rule provided that an electric utility will not be required to purchase energy and capacity from qualifying facilities during periods in which such purchases will result in net increased operating costs to the electric utility. This section was intended to deal with a certain condition which can occur during light loading periods. If a utility operating only base load units during these periods were forced to cut back output from the units in order to accommodate purchases from qualifying facilities, these base load units might not be able to increase their output level rapidly when the system demand later increased. As a result, the utility would be required to utilize less efficient, higher cost units with faster start-up to meet the demand that would have been supplied by the less expensive base load unit had it been permitted to operate at a constant output.

The result of such a transaction would be that rather than avoiding costs as a result of the purchase from a qualifying facility, the purchasing electric utility would incur greater costs than it would have had it not purchased energy or capacity from the qualifying facility. A strict application of the avoided cost principle set forth in this section would assess these additional costs as negative avoided costs which must be reimbursed by the qualifying facility. In order to avoid the anomalous result of forcing a qualifying utility to pay an electric utility for purchasing its output, the Commission proposed that an electric utility be required to identify periods during which this situation would occur, so that the qualifying facility could cease delivery of electricity during those periods.

Many of the comments received reflected a suspicion that electric utilities would abuse this paragraph to circumvent their obligation to purchase from qualifying facilities. In order to minimize that possibility, the Commission has revised this paragraph to provide that any electric utility which seeks to cease purchasing from qualifying facilities must notify each affected qualifying facility prior to the occurrence of such a period, in time for the qualifying facility to cease delivery of energy or capacity to the electric utility. This notification can be accomplished in any reasonable manner determined by the State regulatory authority. Any claim by an electric utility that such a light loading period will occur or has occurred is subject to such verification by its State regulatory authority as the State authority determines necessary or appropriate either before or after its occurrence. Moreover, any electric utility which fails to provide adequate notice or which incorrectly identifies such a period will be required to reimburse the qualifying facility for energy or capacity supplied as if such a light loading period had not occurred.

The section has also been modified to clarify that such periods must be due to operational circumstances.

The Commission does not intend that this paragraph override contractual or other legally enforceable obligations incurred by the electric utility to purchase from a qualifying facility. In such arrangements, the established rate is based on the recognition that the value of the purchase will vary with the changes in the utility's operating costs. These variations ordinarily are taken into account, and the resulting rate represents the average value of the purchase over the duration of the obligation. The occurrence of such periods may similarly be taken into account in determining rates for purchases.

Tax Issues

The Conference Report states that:

> . . . the examination of the level of rates which should apply to the purchase by the utility of the cogenerator's or the small power producer's power should not be burdened

by the same examination as are utility rate applications to determine what is the just and reasonable rate that they should receive for their electric power.[17]

The Commission notes that section 301(b)(2) of the Energy Tax Act of 1978[18] makes certain energy property eligible for increased business investment tax credit. Some of this property is commonly used in cogeneration and small power production. However, section 301(b)(2)(B) excludes from such eligibility property "which is public utility property (within the meaning of section 46(f)(5) of the Internal Revenue Code of 1954)."[19] As a result, if the property of a qualifying facility which was otherwise eligible for the credit were to be classified as public utility property under section 46(f)(5) of the Internal Revenue Code, it would not be eligible for the increased investment tax credit.

The Commission notes that the Treasury Department's regulations provide that the definition of "public utility property" does not include property used in the business of the furnishing or sale of electric energy if the rates are not subject to regulation that fixes a rate of return on investment.[20] On this basis, the Commission believes that property of a qualifying facility that would otherwise be eligible for the energy tax credit would not be excluded from that eligibility under the public utility property exclusion.

First, this Commission is exempting property of qualifying facilities from regulation under Part II of the Federal Power Act, and from similar State and local laws and regulatory programs. Secondly, the Commission observes that the rates a qualifying facility will receive for sales of power to utilities are

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17 Conference Report on H.R. 4018, Public Utility Regulatory Policies Act of 1978, H. Rep. No. 1750, 98, 95th Cong., 2d Sess. (1978).

18 Pub. L. No. 95-618, 26 U.S.C. §§ 46, 48, November 9, 1978.

19 26 U.S.C. § 48(e)(3)(b).

20 Treasury Reg. § 146-3(g)(2), T.D. 7602 (March 23, 1979).

not based on a regulatory scheme which fixes a rate of return on investment of the qualifying facility.

As a result, the Commission believes that energy property of qualifying facilities should not be barred from eligibility for the tax credit by reason of the public utility property exclusion. The Commission wishes to express its opinion on this matter in an effort to further encourage cogeneration and small power production by means of this rulemaking process.

§ 292.305 *Rates for sales.*

Section 210(c) of PURPA provides that the rules requiring utilities to sell electric energy to qualifying facilities shall ensure that the rates for such sales are just and reasonable, in the public interest, and nondiscriminatory with respect to qualifying cogenerators or small power producers. This section contemplates formulation of rates on the basis of traditional ratemaking (*i.e.,* cost-of-service) concepts.

Paragraph (a) expresses the statutory requirement that such rates be just and reasonable and in the public interest. Paragraph (a) also provides that rates for sales from electric utilities to qualifying facilities not be discriminatory against such facilities in comparison to rates to other customers served by the electric utility.

A qualifying facility is entitled to purchase back-up or standby power at a nondiscriminatory rate which reflects the probability that the qualifying facility will or will not contribute to the need for and the use of utility capacity. Thus, where the utility must reserve capacity to provide service to a qualifying facility, the costs associated with that reservation are properly recoverable from the qualifying facility, if the utility would similarly assess these costs to non-generating customers.

In the proposed rule, paragraph (b) required electric utilities to provide energy and capacity and other services to any qualifying facility at a rate at least as favorable as would be provided to a customer who does not have his own generation. The comments received concerning this paragraph noted that this provision might be interpreted as requiring an electric

utility to provide service to a qualifying facility at its most favorable rate, even if the qualifying facility would not be eligible for such a rate if it did not have its own generation. It is not the Commission's intention that, for example, an industrial cogenerator receive service at a rate applicable to residential customers; rather, such a customer should be charged at a rate applicable to a non-generating industrial customer unless the electric utility shows that a different rate is justified on the basis of sufficient load or other cost-related data. Accordingly, this section now provides that for qualifying facilities which do not simultaneously sell and purchase from the electric utility, the rate for sales shall be the rate that would be charged to the class to which the qualifying facility would be assigned if it did not have its own generation.

Subparagraph (2) provides that if, on the basis of accurate data and consistent system-wide costing principles, the utility demonstrates that the rate that would be charged to a comparable customer without its own generation is not appropriate, the utility may base its rates for sales upon those data and principles. The utility may only charge such rates on a nondiscriminatory basis, however, so that a cogenerator will not be singled out to lose any interclass or intraclass subsidies to which it might have been entitled had it not generated part of its electric energy needs itself.

In situations where a qualifying facility simultaneously sells its output to an electric utility and purchases its requirements from that electric utility, as a bookkeeping matter, the facility's electrical output will not serve its own load, but rather will be supplied to the grid. As a result, the facility's electric load is likely to have the same characteristics as the load of other non-generating customers of the utility. If the utility does not provide data showing otherwise, the appropriate rate for sales to such a facility is the rate that would be charged to a comparable customer without its own generation.

Paragraph (b)(2) of the rule sets forth certain types of service which electric utilities are required to provide qualifying facilities upon request of the facility. These types of service are supplementary power, back-up power, interruptible power and

maintenance power. In response to comments, these terms are defined in the text of the rules, as well as in this preamble.

Back-up or maintenance service provided by an electric utility replaces energy or capacity which a qualifying faciluty [sic] ordinarily supplies to itself. These rules authorize certain facilities to purchase and sell simultaneously. The amount of energy or capacity provided by an electric utility to meet the load of a facility which simultaneously purchases and sells will vary only in accordance with changes in the facility's load; interruptions in the facility's generation will be manifested as variations in purchases from the facility. In such a case, sales to the qualifying facility will not be back-up or maintenance service, but will be similar to the full-requirements service that would be provided if the facility were a non-generating customer.

Supplementary power is electric energy or capacity used by a facility in addition to that which it ordinarily generates on its own. Thus, a cogeneration facility with a capacity of ten megawatts might require five more megawatts from a utility on a continuing basis to meet its electric load of fifteen megawatts. The five megawatts supplied by the electric utility would normally be provided as supplementary power.

Back-up power is electric energy or capacity available to replace energy generated by a facility's own generation equipment during an unscheduled outage. In the example provided above, a cogeneration facility might contract with an electric utility for the utility to have available ten megawatts, should the cogenerator's units experience an outage.

Maintenance power is electric energy or capacity supplied during scheduled outages of the qualifying facility. By pre-arrangement, a utility can agree to provide such energy during periods when the utility's other load is low, thereby avoiding the imposition of large demands on the utility during peak periods.

Interruptible power is electric energy or capacity supplied to a qualifying facility subject to interruption by the electric utility under specified conditions. Many utilities have utilized interruptible service to avoid expensive investment in new

capacity that would otherwise be necessary to assure adequate reserves at time of peak demand. Under this approach utilities assure the adequacy of reserves by arranging to reduce peak demand, rather than by adding capacity. Interruptible service is therefore normally provided at a lower rate than non-interruptible service.

During the Commission's public hearings on this rulemaking, one commenter stated that utilities which have excess capacity do not save any costs by providing interruptible service. The commenter contended that the Commission should not require a utility with excess capacity to offer interruptible service. If a utility is not adding capacity (whether by construction or purchase) to meet anticipated increases in peak demand, the rates charged for interruptible service might appropriately be the same as for non-interruptible services.

The Commission believes that these matters involving the provision of interruptible rates are best handled through the pricing mechanism. However, if as discussed above, interruptible customers provide no savings to the electric utility, the rate for interruptible service need not be lower than the rate for firm service. In such a case, the Commission would consider granting a waiver from this paragraph, under the provisions of § 292.403.

Some comments noted that certain electric utilities do not have any generating capacity, and to require the services listed in subparagraph (1) might place an undue burden on the electric utility. In light of these comments, the State regulatory authorities or the Commission, as the case may be, will allow a waiver of these requirements upon a finding after a showing by the utility to the State regulatory authority or Commission, as the case may be, that provision of these services will impair the utility's ability to render adequate service to its customers or place an undue burden on the electric utility. Notice must be given in the area served by the electric utility, opportunity for public comment must be provided, and an application must be submitted to the State regulatory authority with respect to any electric utility over which it has ratemaking authority or the Commission with respect to any nonregulated electric utility.

Paragraph (c)(1) provides that rates for sales of back-up or maintenance power shall not be based, without factual data, on the assumption that forced outages or other reductions in output by each qualifying facility on an electric utility's system will occur either simultaneously or during the system peak. Like other customers, qualifying facilities may well have intra-class diversity. In addition, because of the variations in size and load requirements among various types of qualifying facilities, such facilities may well have interclass diversity.

The effect of such diversity is that an electric utility supplying back-up or maintenance power to qualifying facilities will not have to plan for reserve capacity to serve such facilities on the assumption that every facility will use power at the same moment. The Commission believes that probabilistic analyses of the demand of qualifying facilities will show that a utility will probably not need to reserve capacity on a one-to-one basis to meet back-up requirements. Paragraph (c)(1) prohibits utilities from basing rates on the assumption that qualifying facilities will impose demands simultaneously and at system peak unless supported by factual data.

The rule provides that utilities may refute these assumptions on the basis of factual data. These data need not be in the form of empirical load data. It might be the case that within certain geographic areas, weather data and performance data would constitute a sufficient basis to refute the assumption relating to the coincidence of the demands imposed, for example, by windmills or photovoltaics, with respect to their need for back-up power.

Paragraph (c)(2) provides that rates for sales shall take into account the extent to which a qualifying facility can usefully coordinate periods of scheduled maintenance with an electric utility. If a qualifying facility stays on line when the utility will need its capacity, and schedules maintenance when the utility's other units are operative, the qualifying facility is more valuable to the utility, as it can reduce its capacity requirements.

§ 292.306 *Interconnection costs.*

Paragraph (a) states that each qualifying facility must reimburse any electric utility which purchases capacity or energy from the qualifying facility for any interconnection costs, on a nondiscriminatory basis with respect to other customers with similar load characteristics. The Commission finds merit in those comments which suggested that the basis of comparison for nondiscriminatory practices in the proposed rule to "any other customer" was too broad, and that the correct reference for nondiscrimination is the practice of the utility in relation to customers in the same class who do not generate electricity. As noted previously, the interconnection costs of a facility which is already interconnected with the utility for purposes of sales are limited to any additional expenses incurred by the utility to permit purchases.

Several commenters expressed their concern that some protection should be provided to qualifying facilities from potential harassment by utilities in the form of requiring unnecessary safety equipment. As discussed above, the State regulatory authorities (with respect to electric utilities over which they have ratemaking authority) and nonregulated electric utilities have the responsibility and authority to ensure that the interconnection requirements are reasonable, and that associated costs are legitimately incurred.

For qualifying facilities with a design capacity of 100 kW or less, the Commission noted that interconnection costs could be assessed on a class basis, and the standard rates for purchases established for classes of facilities of this size pursuant to § 292.304(c)(1) might incorporate these costs. State regulatory authorities (with respect to electric utilities over which they have ratemaking authority) or nonregulated electric utilities may also determine interconnection costs for qualifying facilities with a design capacity of more than 100 kW on either a class average of individual basis.

Numerous comments raised the point that the proposed rule did not address the manner in which electric utilities would be reimbursed. Potential owners and developers of qualifying

facilities recommended that the costs be amortized on a reasonable basis, because paying a large lump sum payment would be a considerable obstacle to the program. Electric utilities generally preferred payment up front, although several commenters indicated that amortization might be acceptable for credit-worthy facilities. The Commission believes that the manner of reimbursements (which may include amortization over a reasonable period of time) is best left to the State regulatory authorities and nonregulated utilities. In the determination of any standard rates for purchases established pursuant to § 292.304(c)(i), if the State approves some manner of amortization, it might consider assignment of uncollected interconnection costs to the class for which the rate is established.

§ 292.307 *System emergencies.*

Paragraph (a) provides that, except as provided under section 202(c) of the Federal Power Act, no qualifying facility shall be compelled to provide energy or capacity to the electric utility during an emergency beyond the extent provided by agreement between the qualifying facility and the utility.

The Commission finds that a qualifying facility should not be required to make available all of its generation to the utility during a system emergency. Such a requirement might interrupt industrial processes with resulting damage to equipment and manufactured goods. Many industries install their own generating equipment in order to ensure that even during a system emergency, their supply of power is not interrupted. To put in jeopardy the availability of power to a qualifying facility during a system emergency because of the facility's ability to provide power to the system during non-emergency periods would result in the discouragement of interconnected operation and a resultant discouragement of cogeneration and small power production. The Commission therefore provides that the qualifying facility's obligation to provide energy and capacity in emergencies be established through contract.

In order to receive full credit for capacity, a qualifying facility must offer energy and capacity during system emergen-

cies to the same extent that it has agreed to provide energy and capacity during non-emergency situations. For example, a 30 megawatt cogenerator may require 20 megawatts for its own industrial purposes, and thus may contract to provide 10 megawatts of capacity to the purchasing utility. During an emergency, the cogenerator must provide the 10 megawatts contracted for to the utility; it need not disrupt its industrial processes by supplying its full capability of 30 megawatts. Of course, if it should so desire, a cogenerator could contractually agree to supply the full 30 megawatts during system emergencies. The availability of such additional back-up capacity should increase utility system reliability, and should be accounted for in the utility's rates for purchases from the cogenerator.

Paragraph (b) provides that an electric utility may discontinue purchases from a qualifying facility during a system emergency if such purchases would contribute to the emergency. In addition, during system emergencies, a qualifying facility must be treated on a nondiscriminatory basis in any load shedding program—*i.e.*, on the same basis that other customers of a similar class with similar load characteristics are treated with regard to interruption of service.

Credit for capacity (as noted in § 292.304(e)(2)(v)) will also take into account the ability of the qualifying facility to separate its load and generation during system emergencies. However, the qualifying facility may well be eligible for some capacity credit even if it cannot separate its load and generation.

§ 292.308 *Standards for operating reliability.*

Section 210(a) of PURPA states that the rules requiring electric utilities to buy from and sell to qualifying facilities shall include provisions respecting minimum reliability of qualifying facilities (including reliability of such facilities during emergencies) and rules respecting reliability of electric utilities during emergencies. The Commission believes that the reliability of qualifying facilities can be accounted for through price;

namely, the less reliable a qualifying facility might be, the less it should be entitled to receive for purchases from it by the utility.

As a result, the Commission has not included specific standards relating to the reliability in the sense of the ability of qualifying facilities to provide energy or capacity.

The Commission has determined that safety equipment exists which can ensure that qualifying facilities do not energize utility lines during utility outages. This section accordingly provides that each State regulatory authority or nonregulated electric utility may establish standards for interconnected operation between electric utilities and qualifying facilities. These standards may be recommended by any utility, any qualifying facility, or any other person. These standards must be accompanied by a statement showing the need for the standard on the basis of system safety and operating requirements.

SUBPART D—IMPLEMENTATION

Summary of this Subpart

Rules in this subpart are intended to carry out the responsibility of the Commission to encourage cogeneration and small power production by clarifying the nature of the obligation to implement the Commission's rules under section 210.

These rules afford the State regulatory authorities and nonregulated electric utilities great latitude in determining the manner of implementation of the Commission's rules, provided that the manner chosen is reasonably designed to implement the requirements of Subpart C. The Commission recognizes that many States and individual nonregulated electric utilities have ongoing programs to encourage small power production and cogeneration. The Commission also recognizes that economic and regulatory circumstances vary from State to State and utility to utility. It is within this context—in recognition of the work already begun and of the variety of local conditions—that the Commission promulgates its regulations requiring implementation of rules issued under section 210.

Because of the Commission's desire not to create unnecessary burdens at the State level, these rules provide a procedure whereby a State regulatory authority or nonregulated electric utility may apply to the Commission for a waiver if it can demonstrate that compliance with certain requirements of Subpart C is not necessary to encourage cogeneration or small power production and is not otherwise required under section 210.

Several commenters expressed their concern that State regulatory authorities would not be able adequately to implement the Commission's rules, and therefore recommended that the Commission issue specific rules which the State regulatory authorities would adopt without change. The Commission does not find this proposal to be appropriate at this time, and believes that providing an opportunity for experimentation by the States is more conducive to development of these difficult rate principles.

Implementation

Section 210(f) of PURPA requires that within one year after the date that this Commission prescribes its rules under subsection (a), and within one year of the date any of these rules is revised, each State regulatory authority and each nonregulated electric utility, after notice and opportunity for hearing, must implement the rules or revisions thereof, as the case may be.

The obligation to implement section 210 rules is a continuing obligation which begins within one year after promulgation of such rules. The requirement to implement may be fulfilled either (1) through the enactment of laws or regulations at the State level, (2) by application on a case-by-case basis by the State regulatory authority, or nonregulated utility, of the rules adopted by the Commission, or (3) by any other action reasonably designed to implement the Commission's rules.

Review and Enforcement

Section 210(g) of PURPA provides one of the means of obtaining judicial review of a proceeding conducted by a State

regulatory authority or nonregulated utility for purposes of implementing the Commission's rules under section 210. Under subsection (g), review may be obtained pursuant to procedures set forth in section 123 of PURPA. Section 123(c)(1) contains provisions concerning judicial review and enforcement of determinations made by the State regulatory authorities and nonregulated utilities under Subtitle A, B, or C of Title I in the appropriate State court. These provisions also apply to review of any action taken to implement the rules under section 210. This means that persons can bring an action in State court to require the State regulatory authorities or nonregulated utilities to implement these regulations.

Section 123(c)(2) of PURPA provides that persons seeking review of any determination made by a Federal agency may bring an action in the appropriate Federal court. This distinction between Federal agencies and non-Federal agencies also applies to review of enforcement of the implementation of the rules under section 210.

Finally, the Commission believes that review and enforcement of implementation under section 210 of PURPA can consist not only of review and enforcement as to whether the State regulatory authority or nonregulated electric utility has conducted the initial implementation properly—namely, put into effect regulations implementing section 210 rules or procedures for that implementation, after notice and an opportunity for a hearing. It can also consist of review and enforcement of the application by a State regulatory authority or nonregulated electric utility, on a case-by-case basis, of its regulations or of any other provision it may have adopted to implement the Commission's rules under section 210.

Section 210(h)(2)(A) of PURPA states that the Commission may enforce the implementation of regulations under section 210(f). The Congress has provided not only for private causes of action in State courts to obtain judicial review and enforcement of the implementation of the Commission's rules under section 210, but also provided that the Commission may serve as a forum for review and enforcement of the implementation of this program.

§ 292.401 *Implementation by state regulatory authorities and nonregulated electric utilities*

Paragraph (a) of § 292.401 sets forth the obligation of each State regulatory authority to commence implementation of Subpart C within one year of the date these rules take effect. In complying with this paragraph the State regulatory authorities are required to provide for notice of and opportunity for public hearing. As described in the summary of this subpart, such implementation may consist of the adoption of the Commission's rules, an undertaking to resolve disputes between qualifying facilities and electric utilities arising under Subpart C, or any other action reasonably designed to implement Subpart C.

This section does not cover one provision of Subpart C which is not required to be implemented by the State regulatory authority or nonregulated electric utility. This provision is § 292.302 (Availability of electric utility system cost data), the implementation of which is subject to § 292.402, discussed below.

Subsection (b) sets forth the obligation of each nonregulated electric utility to commence, after notice and opportunity for public hearing, implementation of Subpart C. The nonregulated electric utilities, being both the regulator and the utility subject to the regulation, may satisfy the obligation to commence implementation of Subpart C through issuance of regulations, an undertaking to comply with Subpart C, or any other action reasonably designed to implement that subpart.

Paragraph (c) sets forth a reporting requirement under which each State regulatory authority and nonregulated electric utility is to file with the Commission, not later than one year after these rules take effect, a report describing the manner in which it is proceeding to implement Subpart C.

Comments received regarding this section indicated a concern that the obligation of a State regulatory authority or nonregulated utility "to commence implementation . . . within one year. . . ." did not provide any guidance as to when the process must be completed. The Commission notes that the intention of this section is that the State regulatory authorities

and nonregulated utilities have one year in which to establish procedures and that at the end of that year each State must be prepared to entertain applications. The phrase "commence implementation" is intended by the Commission to connote that implementation of these rules is a continuing process and that oversight will be ongoing.

§ 292.402 *Implementation of reporting objectives*

The obligation to comply with § 292.302 is imposed directly on electric utilities. This is different from the rest of Subpart C where the obligation to act is imposed on the State regulatory authority or the nonregulated electric utility in its role as regulator. The Commission is exercising its authority under section 133 of PURPA and other laws within the Commission's authority to require this reporting.

Any electric utility which fails to comply with the requirements of § 292.302(b) is subject to the same penalties as it might receive as a result of a failure to comply with the requirements of the Commission's regulations issued under section 133 of PURPA. As stated earlier in this preamble, the data required by § 292.302 will form the basis from which the rates for purchases will be derived; § 292.302 is thus a critical element in this program. The Commission believes that, with regard to utilities subject to section 133 of PURPA, the Commission may exercise its authority under section 133 to require the data required by § 292.302(b) on the basis that the Commission finds such information necessary to allow determination of the costs associated with providing electric services. With regard to utilities not subject to section 133, if they fail to provide the data called for in § 292.302(c), the Commission may compel its production under the Federal Power Act and other statutes which provide the Commission with authority to require reporting of such data.

§ 292.403 *Waivers.*

Paragraph (a) provides for a procedure by which any State regulatory authority or nonregulated electric utility may apply

for a waiver from the application of any of the requirements of Subpart C other than § 292.302. (Section 292.302(d) has been revised to permit a State regulatory authority or nonregulated utility to adopt a substitute method for the provision of system cost data without prior Commission approval.)

Paragraph (b) provides that the Commission will grant such a waiver only if the applicant can show that compliance with any of the requirements is not necessary to encourage cogeneration or small power production and is not otherwise required under section 210 of PURPA.

This section is included in recognition of the need for the Commission to afford flexibility to the States and nonregulated utilities to implement the Commission's rules under section 210.

Several comments suggested that the Commission set forth procedures for considering applications for waivers which would allow formal participation by qualifying facilities in a public hearing. The Commission notes that interested parties would be given an opportunity to be heard in any proceeding it conducts to determine whether or not a waiver should be granted.

SUBPART F—EXEMPTION OF QUALIFYING SMALL POWER PRODUCTION AND COGENERATION FACILITIES FROM CERTAIN FEDERAL AND STATE LAWS AND REGULATIONS

§ 292.601 *Exemption of qualifying facilities from the Federal Power Act.*

Section 210(e) of PURPA states that the Commission shall prescribe rules under which qualifying facilities are exempt, in part, from the Federal Power Act, from the Public Utility Holding Company Act of 1935, from State laws and regulations respecting the rates, or respecting the financial or organization regulation, of electric utilities, or from any combination of the foregoing, if the Commission determines such exemption is necessary to encourage cogeneration and small power production. As noted in the Staff Discussion Paper, the Con-

gress intended the Commission to make liberal use of its exemption authority in order to remove the disincentive of utility-type regulation. The Commission believes that broad exemption is appropriate.

Section 210(e)(2) of PURPA provides that the Commission is not authorized to exempt small power production facilities of 30 to 80 megawatt capacity from these laws. An exception is made for small power production facilities using biomass as a primary energy source. Such facilities between 30 and 80 megawatts may be exempted from the Public Utility Holding Company Act of 1935 and from State laws and regulations but may not be exempted from the Federal Power Act. The Commission will establish procedures for the determination of rates for these facilities in a separate proceeding.

Paragraph (a) sets forth those facilities which are eligible for exemption. Paragraph (b) provides that facilities described in paragraph (a) shall be exempted from all but certain specified sections of the Federal Power Act.

Section 210(e)(3)(C) of PURPA provides that no qualifying facility may be exempted from any license or permit requirement under Part I of the Federal Power Act. Accordingly, no qualifying facilities will be exempt from Part I of the Federal Power Act. The Commission recently issued simplified procedures for obtaining water power licenses for hydroelectric projects of 1.5 megawatts or less, and has issued proposed regulations to expedite licensing of existing facilities.[21]

The Commission believes cogeneration and small power production facilities could be the subject of an order under section 202(c) of the Federal Power Act requiring them to provide energy if the Economic Regulatory Administration determines that an emergency situation exists. Because application of this section is limited to emergency situations and is not affected by the fact that a facility attains qualifying status or

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21 *See* Order No. 11, Simplified Procedures for Certain Water Power Licenses, Docket No. RM79-9, issued September 5, 1978, and Application for License for Major Projects—Existing Dam, Docket No. RM79-36, 44 F.R. 24095 (April 21, 1979).

engages in interchanges with an electric utility, the Commission notes that qualifying facilities will not be exempted from section 202(c) of the Act.

Furthermore, in response to comment, the Commission has revised this paragraph to provide that qualifying facilities are not exempt from sections 210, 211, and 212 of the Federal Power Act, as required by section 210(e)(3)(B) of PURPA.

Sections 203, 204, 205, 206, 208, 301, 302, and 304 of the Federal Power Act reflect traditional rate regulation or regulation of securities of public utilities. The Commission has determined that qualifying facilities shall be exempted from these sections of the Federal Power Act.

Section 305(c) of the Act imposes certain reporting requirements on interlocking directorates. The Commission believes that any person who otherwise is required to file a report regarding interlocking positions should not be exempted from such requirement because he or she is also a director or officer of a qualifying facility.

Finally, the enforcement provisions of Part III of the Federal Power Act will continue to apply with respect to the sections of the Federal Power Act from which qualifying facilities are not exempt.

§ 292.602 *Exemption of qualifying facilities from the Public Utility Holding Company Act and certain State law and regulation.*

Under section 210(e) of PURPA the Commission can exempt qualifying facilities from regulation under the Public Utility Holding Company Act of 1935 and State laws and regulations concerning rates or financial organization. Only cogeneration facilities and small power production facilities of 30 megawatts or less may be exempted from both of these laws, with the exception that any qualifying small power production facility (*i.e.*, up to 80 megawatts) using biomass as a primary energy source can be exempted from these laws.

The Commission has determined that where a qualifying facility is subjected to more stringent regulation than other

companies solely by reason of the fact that it is engaged in the production of electric energy, these more stringent requirements should be eased through exemption of qualifying facilities. By excluding any qualifying facility from the definition of an "electric utility company" under section 2(a)(3) of the Public Utility Holding Company Act of 1935, such facilities would be removed from Public Utility Holding Company Act regulation which is applied exclusively to electric utility companies. Moreover, by excluding qualifying facilities from this definition, parent companies of qualifying facilities would not be subject to additional regulation as a result of electric production by their subsidiaries. The Commission therefore believes that in order to encourage cogeneration and small power production it is necessary to exempt cogenerators and small power producers from all of the provisions of the Public Utility Holding Company Act of 1935 related to electric utilities.

Accordingly, paragraph (b) states that no qualifying facility shall be considered to be an "electric utility company", as defined in section 2(a)(3) of the Public Utility Holding Company Act of 1935, 15 U.S.C. § 79b(a)(3).

Section 210(e) of PURPA states that qualifying facilities which may be exempted from the Public Utility Holding Company Act may also be exempted from State laws and regulations respecting the rates or financial organization of electric utilities.

The Commission has decided to provide a broad exemption from State laws and regulations which would conflict with the State's implementation of the Commission's rules under section 210.

The Commission believes that such broad exemption is necessary to encourage cogeneration or small power production. Accordingly, subparagraph (c)(1) provides that any qualifying facility shall be exempt from State laws and regulations respecting rates of electric utilities, and from financial and organizational regulation of electric utilities. Several commenters noted that this section might be interpreted as exempting qualifying facilities from state laws or regulations implement-

ing the Commission's rules, under section 210(f) of PURPA. In order to clarify that qualifying facilities are not to be exempt from these rules, the Commission has added subparagraph (c)(2) prohibiting any exemptions from State laws and regulations promulgated pursuant to Subpart C of these rules.

Some commenters indicated that § 292.301(b)(1) might be interpreted as prohibiting a State from reviewing contracts for purchases. These commenters stated that, as a part of a State's regulation of electric utilities, a State regulatory authority needs to be able to review contracts entered into by electric utilities it regulates.

These rules, and the exemptions being provided by these rules, are not intended to divest a State regulatory agency of its authority under State law to review contracts for purchases as part of its regulation of electric utilities. Such authority may continue to be exercised if consistent with the terms, policies and practices under sections 210 and 201 of PURPA and this Commission's implementing regulations. If the authority or its exercise is in conflict with these sections of PURPA or the Commission's regulations thereunder, the State must yield to the Federal requirements. The Commission does not believe it possible or advisable to attempt to establish more precise guidelines than these. Accordingly, States which have questions in this regard should seek an interpretive ruling from the Commission's General Counsel.

Subparagraph (c)(3) provides that, upon request of a State regulatory authority or nonregulated electric utility, the Commission may limit the applicability of the broad exemption from the State laws. This provision is intended to add flexibility to the exemption.

The Commission perceives that there may be instances in which a qualifying facility would wish to have an interpretation of whether or not it is subject to a particular State law in order to remove any uncertainty. Under subparagraph (c)(4), the Commission may determine whether a qualifying facility is exempt from a particular State law or regulation.

(Public Utility Regulatory Policies Act of 1978, 16 U.S.C. § 2601, *et seq.*, Energy Supply and Environmental Coor-

dination Act, 15 U.S.C. § 791 *et seq.*, Federal Power Act, as amended, 16 U.S.C. § 792 *et seq.*, Department of Energy Organization Act, 42 U.S.C. § 7101 *et seq.*, E.O. 12009, 42 *Fed. Reg.* 46267.)

IV. EFFECTIVE DATE

The regulations promulgated in this order are effective March 20, 1980.

In consideration of the foregoing, the Commission amends Part 292 of Chapter I, Title 18, Code of Federal Regulations, as set forth below, effective March 20, 1980. By the Commission.

(SEAL)

KENNETH F. PLUMB,
Secretary.

(1) Subchapter K is amended in the table of contents and in the text of the regulation by deleting the title for Part 292 and substituting the following in lieu thereof:

Part 292—Regulations Under Sections 201 and 210 of the Public Utility Regulatory Policies Act of 1978 With Regard to Small Power Production and Cogeneration.

(2) Subchapter K is further amended in the table of contents to Part 292 and in the text of the regulations by reserving Subpart B and by adding new Subparts A, C, D, and F to read as follows:

Part 292—Regulations Under Sections 201 and 210 of the Public Utility Regulatory Policies Act of 1978 With Regard to Small Power Production and Cogeneration.

SUBPART A—GENERAL PROVISIONS

Sec.
292.101 Definitions.

SUBPART B—[RESERVED]

SUBPART C—ARRANGEMENTS BETWEEN ELECTRIC UTILITIES AND QUALIFYING COGENERATION AND SMALL POWER PRODUCTION FACILITIES UNDER SECTION 210 OF THE PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978

Sec.
292.301 Scope.
292.302 Availability of Electric Utility System Cost Data.
292.303 Electric Utility Obligations Under This Subpart.
292.304 Rates for Purchases.
292.305 Rates for Sales.
292.306 Interconnection Costs.
292.307 System Emergencies.
292.308 Standards for Operating Reliability.

SUBPART D—IMPLEMENTATION

Sec.
292.401 Implementation by State Regulatory Authorities and Nonregulated Utilities.
292.402 Implementation of Certain Reporting Requirements.
292.403 Waivers.

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SUBPART F—EXEMPTION OF QUALIFYING SMALL POWER PRODUCTION FACILITIES AND COGENERATION FACILITIES FROM CERTAIN FEDERAL AND STATE LAWS AND REGULATIONS

Sec.
292.601 Exemption of Qualifying Facilities from the Federal Power Act.
292.602 Exemption of Qualifying Facilites From the Public Utility Holding Company Act and Certain State Law and Regulation.

(Authority: This part issued under the Public Utility Regulatory Policies Act of 1978, 16 U.S.C. § 2601 *et seq.*, Energy Supply and Environment Coordination Act, 15 U.S.C. § 791 *et seq.*, Federal Power Act, 16 U.S.C. § 792 *et seq.*, Department of Energy Organization Act, 42 U.S.C. § 7101 *et seq.*, E.O. 12009, 42 F.R. 46267.)

SUBPART A—GENERAL PROVISIONS

§ 292.101 *Definitions.*

(a) *General rule.* Terms defined in the Public Utility Regulatory Policies Act of 1978 (PURPA) shall have the same meaning for purposes of this part as they have under PURPA, unless further defined in this part.

(b) *Definitions.* The following definitions apply for purposes of this part.

(1) "Qualifying facility" means a cogeneration facility or a small power production facility which is a qualifying facility under Subpart B of this part of the Commission's regulations.

(2) "Purchase" means the purchase of electric energy or capacity or both from a qualifying facility by an electric utility.

(3) "Sale" means the sale of electric energy or capacity or both by an electric utility to a qualifying facility.

(4) "System emergency" means a condition on a utility's system which is likely to result in imminent significant disruption of service to customers or is imminently likely to endanger life or property.

(5) "Rate" means any price, rate, charge, or classification made, demanded, observed or received with respect to the sale or purchase of electric energy or capacity, or any rule, regulation, or practice respecting any such rate, charge, or classification, and any contract pertaining to the sale or purchase of electric energy or capacity.

(6) "Avoided costs" means the incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source.

(7) "Interconnection costs" means the reasonable costs of connection, switching, metering, transmission, distribution, safety provisions and administrative costs incurred by the electric utility directly related to the installation and maintenance of the physical facilities necessary to permit interconnected operations with a qualifying facility, to the extent such costs are in excess of the corresponding costs which the electric utility would have incurred if it had not engaged in interconnected operations, but instead generated an equivalent amount of electric energy itself or purchased an equivalent amount of electric energy or capacity from other sources. Interconnection costs do not include any costs included in the calculation of avoided costs.

(8) "Supplementary power" means electric energy or capacity supplied by an electric utility, regularly used by a qualifying facility in addition to that which the facility generates itself.

(9) "Back-up power" means electric energy or capacity supplied by an electric utility to replace energy ordinarily generated by a facility's own generation equipment during an unscheduled outage of the facility.

(10) "Interruptible power" means electric energy or capacity supplied by an electric utility subject to interruption by the electric utility under specified conditions.

(11) "Maintenance power" means electric energy or capacity supplied by an electric utility during scheduled outages of the qualifying facility.

SUBPART B—[RESERVED]

SUBPART C—ARRANGEMENTS BETWEEN ELECTRIC UTILITIES AND QUALIFYING COGENERATION AND SMALL POWER PRODUCTION FACILITIES UNDER SECTION 210 OF THE PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978

§ 292.301 *Scope.*

(a) *Applicability.* This subpart applies to the regulation of sales and purchases between qualifying facilities and electric utilities.

(b) *Negotiated rates or terms.* Nothing in this subpart:

(1) limits the authority of any electric utility or any qualifying facility to agree to a rate for any purchase, or terms or conditions relating to any purchase, which differ from the rate or terms or conditions which would otherwise be required by this subpart; or

(2) affects the validity of any contract entered into between a qualifying facility and an electric utility for any purchase.

§ 292.302 *Availability of electric utility system cost data.*

(a) *Applicability.* (1) Except as provided in subparagraph (2), paragraph (b) applies to each electric utility, in any calendar year, if the total sales of electric energy by such utility for purposes other than resale exceeded 500 million kilowatt-hours during any calendar year beginning after December 31, 1975, and before the immediately preceding calendar year.

(2) Each utility having total sales of electric energy for purposes other than resale of less than one billion kilowatt-hours during any calendar year beginning after December 31, 1975, and before the immediately preceding year, shall not be subject to the provisions of this section until May 31, 1982.

(b) *General rule.* To make available data from which avoided costs may be derived, not later than November 1, 1980, May 31, 1982, and not less often than every two years thereafter, each regulated electric utility described in paragraph (a) shall provide to its State regulatory authority, and shall maintain for public inspection, and each nonregulated electric utility described in paragraph (a) shall maintain for public inspection, the following data:

(1) the estimated avoided cost on the electric utility's system, solely with respect to the energy component, for various levels of purchases from qualifying facilities. Such levels of purchases shall be stated in blocks of not more than 100 megawatts for systems with peak demand of 1000 megawatts or more, and in blocks equivalent to not more than 10 percent of the system peak demand for systems of less than 1000 megawatts. The avoided costs shall be stated on a cents per

kilowatt-hour basis, during daily and seasonal peak and off-peak periods, by year, for the current calendar year and each of the next 5 years;

(2) the electric utility's plan for the addition of capacity by amount and type, for purchases of firm energy and capacity, and for capacity retirements for each year during the succeeding 10 years; and

(3) the estimated capacity costs at completion of the planned capacity additions and planned capacity firm purchases, on the basis of dollars per kilowatt, and the associated energy costs of each unit, expressed in cents per kilowatt hour. These costs shall be expressed in terms of individual generating units and of individual planned firm purchases.

(c) *Special rule for small electric utilities.*

(1) Each electric utility (other than any electric utility to which paragraph (b) applies) shall, upon request:

(i) provide comparable data to that required under paragraph (b) to enable qualifying facilities to estimate the electric utility's avoided costs for periods described in paragraph (b); or

(ii) with regard to an electric utility which is legally obligated to obtain all its requirements for electric energy and capacity from another electric utility, provide the data of its supplying utility and the rates at which it currently purchases such energy and capacity.

(2) If any such electric utility fails to provide such information on request, the qualifying facility may apply to the State regulatory authority (which has ratemaking authority over the electric utility) or the Commission for an order requiring that the information be provided.

(d) *Substitution of alternative method.* (1) After public notice in the area served by the electric utility, and after opportunity for public comment, any State regulatory authority may require (with respect to any electric utility over which it has ratemaking authority), or any nonregulated electric utility may provide, data different than those which are otherwise required by this section if it determines that avoided costs can be derived from such data.

(2) Any State regulatory authority (with respect to any electric utility over which it has ratemaking authority) or nonregulated utility which requires such different data shall notify the Commission within 30 days of making such determination.

(e) *State review.* (1) Any data submitted by an electric utility under this section shall be subject to review by the State regulatory authority which has ratemaking authority over such electric utility.

(2) In any such review, the electric utility has the burden of coming forward with justification for its data.

§ 292.303 *Electric utility obligations under this subpart.*

(a) *Obligation to purchase from qualifying facilities.* Each electric utility shall purchase, in accordance with § 292.304, any energy and capacity which is made available from a qualifying facility:

(1) directly to the electric utility; or

(2) indirectly to the electric utility in accordance with paragraph (d).

(b) *Obligation to sell to qualifying facilities.* Each electric utility shall sell to any qualifying facility, in accordance with § 292.305, any energy and capacity requested by the qualifying facility.

(c) *Obligation to interconnect.* (1) Subject to subparagraph (2), any electric utility shall make such interconnections with any qualifying facility as may be necessary to accomplish purchases or sales under this subpart. The obligation to pay for any interconnection costs shall be determined in accordance with § 292.306.

(2) No electric utility is required to interconnect with any qualifying facility if, solely by reason of purchases or sales over the interconnection, the electric utility would become subject to regulation as a public utility under Part II of the Federal Power Act.

(d) *Transmission to other electric utilities.* If a qualifying facility agrees, an electric utility which would otherwise be obligated to purchase energy or capacity from such qualifying facility may transmit the energy or capacity to any other electric utility. Any electric utility to which such energy or capacity is transmitted shall purchase such energy or capacity under this subpart as if the qualifying facility were supplying energy or capacity directly to such electric utility. The rate for purchase by the electric utility to which such energy is transmitted shall be adjusted up or down to reflect line losses pursuant to § 292.304(e)(4) and shall not include any charges for transmission.

(e) *Parallel operation.* Each electric utility shall offer to operate in parallel with a qualifying facility, provided that the qualifying facility complies with any applicable standards established in accordance with § 292.308.

§ 292.304 *Rates for purchases.*

(a) *Rates for purchases.* (1) Rates for purchases shall:

(i) be just and reasonable to the electric consumer of the electric utility and in the public interest; and

(ii) not discriminate against qualifying cogeneration and small power production facilities.

(2) Nothing in this subpart requires any electric utility to pay more than the avoided costs for purchases.

(b) *Relationship to avoided costs.* (1) For purposes of this paragraph, "new capacity" means any purchase from capacity of a qualifying facility, construction of which was commenced on or after November 9, 1978.

(2) Subject to subparagraph (3), a rate for purchases satisfies the requirements of paragraph (a) if the rate equals the avoided costs determined after consideration of the factors set forth in paragraph (e).

(3) A rate for purchases (other than from new capacity) may be less than the avoided cost if the State regulatory authority (with respect to any electric utility over which it has ratemaking authority) or the nonregulated electric utility determines that a

lower rate is consistent with paragraph (a), and is sufficient to encourage cogeneration and small power production.

(4) Rates for purchases from new capacity shall be in accordance with subparagraph (2), regardless of whether the electric utility making such purchases is simultaneously making sales to the qualifying facility.

(5) In the case in which the rates for purchases are based upon estimates of avoided costs over the specific term of the contract or other legally enforceable obligation, the rates for such purchases do not violate this subpart if the rates for such purchases differ from avoided costs at the time of delivery.

(c) *Standard rates for purchases.* (1) There shall be put into effect (with respect to each electric utility) standard rates for purchases from qualifying facilities with a design capacity of 100 kilowatts or less.

(2) There may be put into effect standard rates for purchases from qualifying facilities with a design capacity of more than 100 kilowatts.

(3) The standard rates for purchases under this paragraph:

(i) shall be consistent with paragraphs (a) and (e); and

(ii) may differentiate among qualifying facilities using various technologies on the basis of the supply characteristics of the different technologies.

(d) *Purchases "as available" or pursuant to a legally enforceable obligation.* Each qualifying facility shall have the option either:

(1) to provide energy as the qualifying facility determines such energy to be available for such purchases, in which case the rates for such purchases shall be based on the purchasing utility's avoided costs calculated at the time of delivery; or

(2) to provide energy or capacity pursuant to a legally enforceable obligation for the delivery of energy or capacity over a specified term, in which case the rates for such purchases shall, at the option of the qualifying facility exercised prior to the beginning of the specified term, be based on either:

(i) the avoided costs calculated at the time of delivery; or

(ii) the avoided costs calculated at the time the obligation is incurred.

(e) *Factors affecting rates for purchases.* In determining avoided costs, the following factors shall, to the extent practicable, be taken into account:

(1) the data provided pursuant to § 292.302(b), (c), or (d), including State review of any such data;

(2) the availability of capacity or energy from a qualifying facility during the system daily and seasonal peak periods, including:

(i) the ability of the utility to dispatch the qualifying facility;

(ii) the expected or demonstrated reliability of the qualifying facility;

(iii) the terms of any contract or other legally enforceable obligation, including the duration of the obligation, termination notice requirement and sanctions for non-compliance;

(iv) the extent to which scheduled outages of the qualifying facility can be usefully coordinated with scheduled outages of the utility's facilities;

(v) the usefulness of energy and capacity supplied from a qualifying facility during system emergencies, including its ability to separate its load from its generation;

(vi) the individual and aggregate value of energy and capacity from qualifying facilities on the electric utility's system; and

(vii) the smaller capacity increments and the shorter lead times available with additions of capacity from qualifying facilities; and

(3) the relationship of the availability of energy or capacity from the qualifying facility as derived in subparagraph (2), to the ability of the electric utility to avoid costs, including the deferral of capacity additions and the reduction of fossil fuel use; and

(4) the costs or savings resulting from variations in line losses from those that would have existed in the absence of purchases from a qualifying facility, if the purchasing electric utility generated an equivalent amount of energy itself or purchased an equivalent amount of electric energy or capacity.

(f) *Periods during which purchases not required.*

(1) Any electric utility which gives notice pursuant to subparagraph (2) will not be required to purchase electric energy or capacity during any period during which, due to operational circumstances, purchases from qualifying facilities will result in costs greater than those which the utility would incur if it did not make such purchases, but instead generated an equivalent amount of energy itself.

(2) Any electric utility seeking to invoke subparagraph (1) must notify, in accordance with applicable State law or regulation, each affected qualifying facility in time for the qualifying facility to cease the delivery of energy or capacity to the electric utility.

(3) Any electric utility which fails to comply with the provisions of subparagraph (2) will be required to pay the same rate for such purchase of energy or capacity as would be required had the period described in subparagraph (1) not occurred.

(4) A claim by an electric utility that such a period has occurred or will occur is subject to such verification by its State regulatory authority as the State regulatory authority determines necessary or appropriate, either before or after the occurrence.

§ 292.305 *Rates for sales.*

(a) *General rules.* (1) Rates for sales:

(i) shall be just and reasonable and in the public interest; and

(ii) shall not discriminate against any qualifying facility in comparison to rates for sales to other customers served by the electric utility.

(2) Rates for sales which are based on accurate data and consistent systemwide costing principles shall not be considered to discriminate against any qualifying facility to the extent that such rates apply to the utility's other customers with similar load or other cost-related characteristics.

(b) *Additional Services to be Provided to Qualifying Facilities.* (1) Upon request of a qualifying facility, each electric utility shall provide:

(i) supplementary power;
(ii) back-up power;
(iii) maintenance power; and
(iv) interruptible power.

(2) The State regulatory authority (with respect to any electric utility over which it has ratemaking authority) and the Commission (with respect to any nonregulated electric utility) may waive any requirement of subparagraph (1) if, after notice in the area served by the electric utility and after opportunity for public comment, the electric utility demonstrates and the State regulatory authority or the Commission, as the case may be, finds that compliance with such requirement will:

(i) impair the electric utility's ability to render adequate service to its customers; or

(ii) place an undue burden on the electric utility.

(c) *Rates for sales of back-up and maintenance power.* The rate for sales of back-up power or maintenance power:

(1) shall not be based upon an assumption (unless supported by factual data) that forced outages or other reductions in electric output by all qualifying facilities on an electric utility's system will occur simultaneously, or during the system peak, or both; and

(2) shall take into account the extent to which scheduled outages of the qualifying facilities can be usefully coordinated with scheduled outages of the utility's facilities.

§ 292.306 *Interconnection costs.*

(a) *Obligation to pay.* Each qualifying facility shall be obligated to pay any interconnection costs which the State regulatory authority (with respect to any electric utility over which it has ratemaking authority) or nonregulated electric utility may assess against the qualifying facility on a nondiscriminatory basis with respect to other customers with similar load characteristics.

(b) *Reimbursement of interconnection costs.* Each State regulatory authority (with respect to any electric utility over

which it has ratemaking authority) and nonregulated utility shall determine the manner for payments of interconnection costs, which may include reimbursement over a reasonable period of time.

§ 292.307 *System emergencies.*

(a) *Qualifying facility obligation to provide power during system emergencies.* A qualifying facility shall be required to provide energy or capacity to an electric utility during a system emergency only to the extent:

(1) provided by agreement between such qualifying facility and electric utility; or

(2) ordered under section 202(c) of the Federal Power Act.

(b) *Discontinuance of purchases and sales during system emergencies.* During any system emergency, an electric utility may discontinue:

(1) purchases from a qualifying facility if such purchases would contribute to such emergency; and

(2) sales to a qualifying facility, provided that such discontinuance is on a nondiscriminatory basis.

§ 292.308 *Standards for operating reliability.*

Any State regulatory authority (with respect to any electric utility over which it has ratemaking authority) or nonregulated electric utility may establish reasonable standards to ensure system safety and reliability of interconnected operations. Such standards may be recommended by any electric utility, any qualifying facility, or any other person. If any State regulatory authority (with respect to any electric utility over which it has ratemaking authority) or nonregulated electric utility establishes such standards, it shall specify the need for such standards on the basis of system safety and reliability.

SUBPART D—IMPLEMENTATION

§ 292.401 *Implementation by State regulatory authorities and nonregulated electric utilities.*

(a) *State regulatory authorities.* Not later than one year after these rules take effect, each State regulatory authority shall, after notice and an opportunity for public hearing, commence implementation of Subpart C (other than § 292.302 thereof). Such implementation may consist of the issuance of regulations, an undertaking to resolve disputes between qualifying facilities and electric utilities arising under Subpart C, or any other action reasonably designed to implement such subpart (other than § 292.302 thereof).

(b) *Nonregulated electric utilities.* Not later than one year after these rules take effect, each nonregulated electric utility shall, after notice and an opportunity for public hearing, commence implementation of Subpart C (other than § 292.302 thereof). Such implementation may consist of the issuance of regulations, an undertaking to comply with Subpart C, or any other action reasonably designed to implement such subpart (other than § 292.302 thereof).

(c) *Reporting requirement.* Not later than one year after these rules take effect, each State regulatory authority and nonregulated electric utility shall file with the Commission a report describing the manner in which it will implement Subpart C (other than § 292.302 therof).

§ 292.402 *Implementation of Certain Reporting Requirements.*

Any electric utility which fails to comply with the requirements of § 292.302(b) shall be subject to the same penalties to which it may be subjected for failure to comply with the requirements of the Commission's regulations issued under section 133 of PURPA.

§ 292.403 *Waivers.*

(a) *State regulatory authority and nonregulated electric utility waivers.* Any State regulatory authority (with respect to any electric utility over which it has ratemaking authority) or nonregulated electric utility may, after public notice in the area served by the electric utility, apply for a waiver from the application of any of the requirements of Subpart C (other than § 292.302 thereof).

(b) *Commission action.* The Commission will grant such a waiver only if an applicant under paragraph (a) demonstrates that compliance with any of the requirements of Subpart C is not necessary to encourage cogeneration and small power production and is not otherwise required under section 210 of PURPA.

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SUBPART F—EXEMPTION OF QUALIFYING SMALL POWER PRODUCTION FACILITIES AND COGENERATION FACILITIES FROM CERTAIN FEDERAL AND STATE LAWS AND REGULATIONS

§ 292.601 *Exemption to qualifying facilities from the Federal Power Act.*

(a) *Applicability.* This section applies to:

(1) qualifying cogeneration facilities; and

(2) qualifying small power production facilities which have a power production capacity which does not exceed 30 megawatts.

(b) *General rule.* Any qualifying facility described in paragraph (a) shall be exempt from all sections of the Federal Power Act, except:

(1) sections 1-30;

(2) sections 202(c), 210, 211, and 212;

(3) section 305(c); and

(4) any necessary enforcement provision of Part III with regard to the sections listed in subparagraphs (1), (2) and (3).

§ 292.602 *Exemption to qualifing facilities from the Public Utility Holding Company Act and certain State law and regulation.*

(a) *Applicability.* This section applies to any qualifying facility described in § 292.601(a), and to any qualifying small power production facility with a power production capacity over 30 megawatts if such facility produces electric energy solely by the use of biomass as a primary energy source.

(b) *Exemption from the Public Utility Holding Company Act of 1935.* A qualifying facility described in paragraph (a) shall not be considered to be an "electric utility company" as defined in section 2(a)(3) of the Public Utility Holding Company Act of 1935, 15 U.S.C. § 79b(a)(3).

(c) *Exemption from certain State law and regulation.*

(1) Any qualifying facility shall be exempted (except as provided in subparagraph (2)) from State law or regulation respecting:

(i) the rates of electric utilities; and

(ii) the financial and organizational regulation of electric utilities.

(2) A qualifying facility may not be exempted from State law and regulation implementing Subpart C.

(3) Upon request of a State regulatory authority or nonregulated electric utility, the Commission may consider a limitation on the exemptions specified in subparagraph (1).

(4) Upon request of any person, the Commission may determine whether a qualifying facility is exempt from a particular State law or regulation.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

(18 CFR Part 292)

Docket No. RM79-54

Before Commissioners:

Charles B. Curtis, *Chairman;*
Georgiana Sheldon, Matthew Holden, Jr.,
and George R. Hall.

SMALL POWER PRODUCTION AND
COGENERATION FACILITIES — QUALIFYING STATUS

ORDER NO. 70

FINAL RULE ESTABLISHING REQUIREMENTS AND
PROCEDURES FOR A DETERMINATION OF QUALIFYING
STATUS FOR SMALL POWER PRODUCTION
AND COGENERATION FACILITIES

(Issued March 13, 1980)

Section 201 of the Public Utility Regulatory Policies Act of 1978 (PURPA) mandates that the Federal Energy Regulatory Commission (Commission) prescribe rules under which small power production facilities and cogeneration facilities can obtain "qualifying" status, and thus become eligible for the rates and exemptions set forth in the Commission's rules implementing section 210 of PURPA.

Section 201 of PURPA[1] defines a "small power production facility" as a facility which:

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1 Section 3(17)(A) of the Federal Power Act.

(1) produces electric energy solely by the use, as a primary energy source, of biomass, waste, renewable resources, or any combination thereof; and
(2) has a power production capacity which, together with any other facilities located at the same site (as determined by the Commission), is not greater than 80 megawatts.

A cogeneration facility is defined as a facility which produces electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating, or cooling purposes.[2]

Thus, cogeneration facilities simultaneously produce two forms of useful energy, namely electric power and heat. Cogeneration facilities can use significantly less fuel to produce electricity and steam (or other forms of energy) than would be needed to produce the two separately. By using fuels more efficiently, cogeneration facilities can make a significant contribution to the Nation's effort to conserve its energy resources.

Small power production facilities as defined in the Act use biomass, waste, or renewable resources, including wind, solar energy and water, to produce electric power. Reliance on these sources of energy can reduce the need to consume fossil fuels to generate electric power.

Prior to the enactment of PURPA, a cogenerator or small power producer seeking to establish interconnected operation with a utility faced three major obstacles. First, a utility was not generally willing to purchase the electric output or was not willing to pay an appropriate rate. Secondly, some utilities charged discriminatorily high rates for back-up service to cogenerators and small power producers. Thirdly, a cogenerator or small power producer which provided electricity to a utility's grid ran the risk of being considered an electric utility and thus being subjected to extensive State and Federal regulation.

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2 Section 3(18)(A) of the Federal Power Act.

Sections 201 and 210 of PURPA are designed to remove these obstacles. Each electric utility is required under section 210 to offer to purchase available electric energy from cogeneration and small power production facilities which obtain qualifying status under section 201 of PURPA, and to provide back-up power and other services to such facilities on a non-discriminatory basis. For such purchases, electric utilities are required to pay rates which are just and reasonable to the ratepayers of the utility, which are in the public interest, and which do not discriminate against cogenerators and small power producers. Section 210(e) of PURPA provides that the Commission can exempt qualifying facilities from State regulation regarding utility rates and financial organization, from Federal regulation under the Federal Power Act (other than licensing under Part I), and from the Public Utility Holding Company Act. Finally, under section 206(c)(3) of the Natural Gas Policy Act of 1978 (NGPA), the Commission may exempt qualifying cogeneration facilities from the incremental pricing program under Title II of the NGPA.

In this rulemaking, the Commission sets forth requirements for qualifying cogeneration and small power production facilities and procedures by which such facilities may obtain qualification. Rules implementing section 210 of PURPA have been prescribed in Docket No. RM79-55.[3]

Any qualifying facility is eligible for the exemptions set forth in Subpart F of this part of the Commission's regulations immediately upon issuance of these rules. With regard to the rate benefits for qualifying facilities found in Subpart C of this part, however, the statute provides that the State regulatory authorities and nonregulated electric utilities will have up to one year to implement the Commission's rules. Therefore, the latest date by which qualifying facilities will be eligible to receive these PURPA-derived rate benefits is February 19, 1981.

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[3] 18 C.F.R. Part 292, Subparts A, C, D and F; 45 Fed. Reg. 12214 (Feb. 25, 1980).

I. PROCEDURAL HISTORY

On June 27, 1979, the Commission issued proposed rules in this docket[4] to determine which cogeneration and small power production facilities may become "qualifying" cogeneration or small power production facilities under section 201 of PURPA.

Public hearings on RM79-54 were held in San Francisco on July 23, 1979, Chicago on July 27, 1979, and Washington, D.C. on July 30, 1979. Written comments were also received.

On October 18, 1979, the Commission issued a Notice of Proposed Rulemaking Under Section 210 of PURPA in Docket No. RM79-55.[5] On October 19, 1979, the Commission made available its preliminary Environmental Assessment (EA) of the proposed rules in Docket Nos. RM79-54 and RM79-55.

In a Request for Further Comments[6], the Commission requested further public comment on both proposed rules, and on the findings set forth in the preliminary EA. In order to obtain the data, views, and arguments of interested persons, the Commission Staff held public hearings in Seattle on November 19, 1979, in New York City on November 28, 1979, in Denver on November 30, 1979, and in Washington, D.C. on December 4 and 5, 1979. The Commission also received written comment. All of the comments were considered in the formulation of this final rule.

II. SUMMARY

These rules set forth criteria and procedures by which cogeneration and small power production facilities can obtain qualifying status to receive the rate benefits and exemptions set forth in the Commission's rules implementing section 210 of PURPA.

The rules in this docket permit qualification without a need for specific Commission action. They also make available an

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4 44 Fed. Reg. 38872 (July 3, 1979).

5 44 Fed. Reg. 61190 (Oct. 24, 1979).

6 44 Fed. Reg. 61977 (Oct. 29, 1979).

optional procedure under which, should it prove desirable, a facility can gain certification as a "qualifying facility." For qualifying small power production facilities, the efficiency standards contained in the proposed rule have been eliminated, and the permitted level of oil, natural gas and coal use for startup, testing, flame stabilization, and operation during outages of the primary energy supply system has been increased and the form of that requirement has been simplified. For qualifying cogeneration facilities, efficiency standards still must be met by certain new facilities using oil or gas. In addition, certain operating standards have been adopted for purposes of assuring that a qualifying cogenerator is a *bona fide* generator.

III. SECTION-BY-SECTION ANALYSIS

§ 292.201 *Scope.*

Section 292.201 describes the scope of Subpart B of the Commission's rules. Subpart B provides the criteria for and manner of qualification of small power production and cogeneration facilities.

§ 292.202 *Definitions.*

This section contains definitions applicable to this subpart of the Commission's rules.

Paragraph (a) defines "biomass" as any organic material not derived from fossil fuels. The proposed rule defined "biomass" as plant materials which are obtained from cultivation, or harvested from naturally occurring vegetation without significant depletion of the resource. Commenters recommended that the Commission expand the definition to include any organic material not derived from fossil fuels. The commenters stated that most studies dealing with energy recovery from organic material other than fossil fuels have included municipal (and most industrial) solid waste within the more general category of biomass.

The Commission agrees with the commenters who urged the Commission to expand the scope of this definition. The Com-

mission observes that applying a narrow definition of biomass might hinder development of small power production facilities between 30 megawatts and 80 megawatts in capacity. Use of a definition of biomass which includes by-products of the manufacturing, harvesting, and growing of agricultural products, including wood, will enable a greater number of small power producers between 30 and 80 megawatts to take advantage of the exemption from State law and regulation regarding rates and financial organization of electric utilities and from the Public Utility Holding Company Act, as provided in Subpart F of this part of the Commission's rules.

One commenter questioned whether the Commission meant to include peat within the definition of biomass. The Commission wishes to clarify this point by stating that peat is included in the definition of biomass for purposes of this subpart.

Paragraph (b) defines "waste" as any by-product materials other than biomass. In most instances, waste is a by-product of fossil fuels. Examples of waste include petroleum coke, refinery gas, and plastics.

Paragraph (c) defines "cogeneration facility" as equipment used to produce electric energy and forms of useful thermal energy (such as heat or steam), used for industrial, commercial, heating, or cooling purposes, through the sequential use of energy.

Several commenters requested clarification of the applicability of the Commission's rules to cogeneration in the residential sector. The issue arises because of the absence of any explicit mention of residential energy use in the statutory language. The Commission's definition of cogeneration facility tracks the statutory language in that residential use is not specifically identified.

The Commission intends that residential sector cogeneration be included. The Commission believes that the phrase "heating, or cooling purposes" applies to any industrial, commercial, or residential heating or cooling purpose. The Commission has not found anything in the legislative history of PURPA which suggests that the terms "industrial" and "commercial" were intended to modify "heating, or cooling". Sepa-

rate mention of "residential" use is unnecessary because heating and cooling adequately encompass the residential use of thermal energy. In the industrial sector, thermal energy in the form of process steam is used as an input to many industrial processes. The separate identification of industrial and heating uses is necessary since not all industrial uses of thermal energy are for heating or cooling purposes. In addition, in many instances, commercial heating purposes include heating of residential apartment buildings, so that the exclusion of residential heating and cooling from this program would be difficult to accomplish even if such purpose were within the realm of statutory construction.

Sequential Use

Several commenters recommended that the Commission define cogeneration as the "combined" or "joint" production of heat and power. However, the terms "combined" or "joint" production of heat and power do not fully describe the cogeneration process. The final rules contain an explicit requirement for the sequential use of energy in cogeneration facilities. This means that rejected heat from a power production or heating process is used in another power production or heating process. It is precisely this "cascading" use of energy in sequential processes that gives rise to the energy conserving characteristic of cogeneration.

By adding the phrase "through the sequential use of energy" to the definition of cogeneration facility, the Commission makes explicit what was intended in the proposed rule. The discussions in the proposed rule relating to topping and bottoming-cycle cogeneration and the efficiency standards were expressed in the context of sequential use. Many commenters apparently recognized this fact and, in their discussions of alternative efficiency standards, compared hypothetical cogeneration systems to reference cases of noncogeneration, separate production of heat and power. Additionally, the explanation of supplementary firing in the proposed rules implied that energy inputs other than supplementary firing would

have to flow through both a thermal and a power production process. The explicit mention of sequential use is therefore not a new requirement; it is a clarification of intent.

Several comments filed in this rulemaking in response to the Commission's November 9, 1979 Interim Rule[7] raised questions about how the sequential use concept would apply in certain situations. One commenter noted that many industries commonly route steam directly from their boilers to processes without expansion in a turbine. This practice is simply the raising of process steam; it is not cogeneration. The fact that some other steam from the same boiler is routed to cogeneration equipment does not mean that all steam from the boiler is used for cogeneration. The coincident raising of process steam relates to the cogeneration rules in two ways. First, any energy expended in raising such steam should not be entered into any efficiency calculations. Secondly, natural gas used for raising process steam is not rendered exempt from incremental pricing solely because the boiler may also supply steam for cogeneration.

A commenter also questioned the applicability of the sequential use test to a combustion turbine coupled with a waste heat recovery boiler. The commenter noted that the boiler could not capture all of the heat in the turbine exhaust and thus not all of the turbine's power could be said to be sequential. The Commission does not adopt this interpretation. The high efficiency of combustion turbine/waste heat recovery boilers derives from the fact that a substantial quantity of waste heat is recovered. The Commission does not require that all heat be recovered. Strictly speaking, some of the available thermal energy in a steam turbine cogeneration system is lost (due to pressure drop in piping along with convective and radiative heat losses) before the steam is delivered to a useful process. As long as any applicable efficiency and operating standards are met, the Commission is not concerned with energy losses within the system.

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[7] Interim Rule for Qualification of Gas-Fired Cogeneration Facilities for Purposes of the Incremental Pricing Program, 44 Fed. Reg. 65744 (Nov. 15, 1979).

A final issue concerning the definition of a cogeneration facility involves combined-cycle electric generation plants. Such plants burn gaseous or liquid fuels in a combustion turbine and use the turbine exhaust to raise steam. The steam is directed through a fully condensing steam turbine. Only electricity is produced, albeit through the sequential use of energy. The Commission is of the opinion that combined-cycle electric generation plants are not cogeneration facilities, since only one form of energy is produced.

In paragraph (d), the Commission has added the definition of "topping-cycle cogeneration facility" which is a cogeneration facility in which the energy input to the facility is first used to produce power, and the reject heat from power production is then used to provide useful heat.

Paragraph (e) has been added to define a "bottoming-cycle cogeneration facility" as a cogeneration facility in which the energy input to the system is first applied to a useful heating process, and the residual heat emerging from the process is then used for power production.

The Commission has added paragraph (f), which defines "supplementary firing" as an energy input to the cogeneration facility used only in the thermal process of a topping-cycle cogeneration facility, or only in the electric generating process of a bottoming-cycle cogeneration facility.

The distinguishing characteristic of supplementary firing as defined here is that none of the energy is used sequentially. In topping cycles, supplementary firing is commonly practiced by introducing natural gas or oil into the hot exhaust of a combustion turbine. The turbine exhaust will typically have sufficient oxygen to support combustion of the added fuel. The resulting heat can either be used directly in a high-temperature direct heat application or used to raise process steam. Supplementary firing is also possible in steam turbine cogeneration facilities, through reheat of steam which exits from a turbine. In all cases, the added energy is not used to produce power as well as useful thermal energy.

In a bottoming-cycle cogeneration facility, supplementary firing can be used to increase the output of the power produc-

tion equipment by firing additional fuel in the thermal process exhaust. Again, the added energy is not used sequentially for both power production and a thermal process.

The Commission recognizes that there will be questions as to the application of the standards of this subpart to complex facilities which may contain combinations of topping and bottoming-cycle cogeneration equipment. The optional procedure for qualification under § 292.207 is available specifically to help any cogenerator who wishes clarification as to whether his facility would qualify.

Paragraph (g) adds the definition of "useful power output" of a cogeneration facility as the electrical or mechanical energy made available for use, exclusive of any such energy used in the power production process. Although electric power output is required of a qualifying facility, any additional mechanical power may be taken into account in determining "useful power output".

Paragraph (h) has been added to define "useful thermal energy output" of a topping-cycle cogeneration facility as the thermal energy made available for use in any industrial or commercial process, or used in any heating or cooling application.

The proposed rules contained a definition of the "useful energy output of a thermal process." The term was intended to reflect the heat actually used in a thermal process rather than heat made available for use. The proposed term found application in proposed efficiency standards for both topping and bottoming cycles. Only a few commenters mentioned the proposed term, but they did raise serious questions about the feasibility (and desirability) of performing the necessary calculations. It was argued that computation of the "useful energy output of a thermal process" in accordance with the proposed definition would be difficult and would yield unintended results—particularly in the case of bottoming cycles.

The Commission notes that in its final rules the efficiency of bottoming-cycle facilities is evaluated only with respect to supplementary firing. No evaluation of efficiency is now required for the thermal process of a bottoming cycle.

For new topping-cycle facilities burning natural gas or oil, however, the degree to which heat is recovered and put to use remains a concern. The final rules contain a definition of "useful thermal energy output" which eliminates the problems of the proposed terminology. Under the new definition, in the case of industrial or commercial process use of thermal energy, the thermal energy made available for use in the process may be considered useful thermal energy output of a cogeneration facility. Thus an industrial process which uses steam or heat need not be analyzed for the purpose of determining what fraction of the energy delivered to the process is actually put to use.

In the case of space heating and cooling, water heating, and related heating and cooling applications, a cogeneration facility's useful thermal energy output is the energy actually used in the application. For example, a cogeneration facility may consist of a combustion turbine with exhaust heat recovery used for space heating. In this example, the useful thermal energy output would be the heat recovered from the exhaust and actually used for space heating, not all of the heat available in the exhaust.

Paragraph (i) defines "total energy output" of a topping-cycle cogeneration facility as the sum of the useful power output and useful thermal energy output.

Paragraph (j) defines the term "total energy input" as the total energy of all forms supplied from external sources, other than supplementary firing, to the facility.

The total energy input to a cogeneration facility includes all fuels and renewable resources used in the facility. Energy taken from one part of the facility and used in another part of the cogeneration process does not meet the test of being supplied from an external source. For example, boiler feedwater pumping, heating, and de-aerating are energy uses internal to the cogeneration facility and are not to be considered as either energy inputs or energy outputs.

The Commission has added the definition of natural gas in paragraph (k) as it is defined in the Natural Gas Act, which is the natural gas unmixed, or any mixture of natural gas and

artifical gas. This is intended to cover natural gas supplied by any natural gas company as defined in the Natural Gas Act or any distribution company selling natural gas. As a result, the efficiency standards under § 292.205 only apply with respect to the natural gas so defined and do not apply with regard to any synthetic gas which is unmixed in the pipeline, or mixed by the end-user, such as coke oven gas, blast furnace gas, or gas derived from coal or shale oil.

The definition of "oil" has been added in paragraph (l) to mean crude oil, residual fuel oil, natural gas liquids, or any refined petroleum products. This definition does not include refinery-off gas, petroleum coke, or other waste products of the refinery process.

Finally, the Commission has provided in paragraph (m) that, for purposes of this subpart, in the case of energy in the form of natural gas or oil, energy input is to be measured by the lower heating value of such fuel.

In the proposed rules, energy inputs in the form of fossil fuels were to be evaluated in terms of the lower heating value of such fuels. A few commenters took issue with the use of lower heating values and recommended that higher heating values be specified in the final rule.

Lower heating values were specified in the proposed rules in recognition of the fact that practical cogeneration systems cannot recover and use the latent heat of water vapor formed in the combustion of hydrocarbon fuels. By specifying that energy input to a facility excludes energy that could not be recovered, the Commission hoped that the proposed energy efficiency standards would be easier to understand and apply. The Commission also wished to apply a standard that would be more uniform in the treatment of natural gas and oil. Owing to the difference in chemical composition, more latent, unrecoverable heat is lost in the combusion of gas as compared to oil. The Commission did not wish indirectly to make qualification more difficult for natural gas-fired cogeneration facilities by requiring a higher level of sensible heat recovery.

The commenters opposing the use of lower heating values generally argued that customary practice is to use higher

heating values. The Commission does not find this argument compelling. Both heating values of fuels can easily be found in handbooks. Moreover, if a cogenerator wishes to use the higher heating value of fossil fuels inputs for computing efficiency, the Commission has no objection. Any facility qualifying with efficiency so computed would certainly qualify under the more lenient rules set forth. As a result, the Commission does not believe it appropriate to change this aspect of the proposed rule in this final rule.

§ 292.203 *General requirements for qualification.*

The proposed rule provided that any person seeking qualifying status for a facility had to initiate discussions with the utility with which it wishes to interconnect and file an application with this Commission. The proposed rule set forth the contents of an application for certification which included technical information describing the facility, a summary of discussions required to be held between the applicant and the affected electric utility, and a description of the equity ownership of the facility. In addition, a small power producer was required to provide information about its primary energy source and its location. A cogenerator was required to submit information describing the energy input and output of the facility in both the heat engines and thermal processes.

The majority of comments favored eliminating the filing requirement either for all qualifying facilities or for specific classes of qualifying facilities. Several commenters suggested that the complexity, delays, and uncertainties created by a case-by-case qualification procedure would act as significant economic disincentive to owners of smaller facilities. Other commenters recommended exempting smaller facilities, such as facilities with an aggregate electrical capacity of up to 250 or 500 kW, from formal filing requirements. A utility[8] stated that the application procedure does not serve any party or the public's interest. This commenter preferred to see regulations

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8 Pacific Gas and Electric Company.

on an "exception" basis where the utility, State regulatory authority or other interested party could object to the granting of qualifying status.

The Commission finds substantial merit in these comments. The Commission believes the initiation of purchase and sale arrangements, pursuant to Subpart C of this part of the Commission's rules, will necessitate the flow of information between potential qualifying facilities and affected electric utilities. The Commission therefore notes that the requirements contained in the proposed rule both for discussions between a potential qualifying facility and the utility with which it wishes to interconnect and for the filing of substantial information with this Commission are not necessary.

For example, one commenter[9] suggested modifying the pre-application negotiation requirements to require that an applicant initiate discussions with the utility prior to filing if the cogenerator or small power producer is intending to negotiate an individual contract. However, if the applicant merely wants to establish his eligibility for an already-published rate schedule for qualifying facilities, this commenter claims that there would be nothing to negotiate, and thus no reason to require that discussions be held. It was asserted that notification to the utility at the time of application would suffice in such cases. The Commission believes that this is what would and should happen without any requirement from the Commission. In addition, the Commission believes that, as a practical matter, an electric utility, which is notified by a qualifying facility that it wishes to interconnect with the utility in order that the utility may purchase the power produced by the facility, will need to know the nature of the qualifying facility's expected purchases and sales so as to be able to arrange safe and reliable interconnected operation at appropriate rates.

As a result, the requirement for case-by-case qualification has been eliminated. Section 292.207(a) of this rule provides that any small power production or cogeneration facility which

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9 U.S. Department of Energy.

meets the requirements for qualification set forth in that section is a qualifying facility.

However, the Commission has provided an optional procedure in § 292.207(b) of this rule whereby an application for Commission certification of qualifying status may be filed at the discretion of the owner or operator of the facility.

There was some confusion in the comments as to who actually qualifies under this program. The facility qualifies and that entitles the owners and operators of the facility to receive the benefits of qualification under this part. The benefits of qualification under this part, however, are only with respect to the qualifying facility. For example, the owner or operator of a qualifying cogeneration facility is entitled to require the utility to sell power to his qualifying facility in compliance with the terms of § 292.305 as implemented by the State regulatory authority. The owner or operator has no entitlement to require such rate treatment for the utility's sales to other facilities he may own or operate which are not qualifying facilities. Similarly, his sales to the utility will be exempt under Subpart F of this part from certain Federal and State regulation only to the extent the sales are from a qualifying facility.

§ 292.203(a) *Small power production facilities.*

Section 292.203(a) provides that a small power production facility is a qualifying facility if it meets three criteria.

The first requirement is that the power production capacity of the facility, together with the capacity of any other facilities that use the same energy resource and are owned by the same person and are located at the same site, may not exceed 80 megawatts. The method by which the capacity is determined is described in this preamble under § 292.204.

The second requirement is that the primary energy source of the facility must be biomass, waste, renewable resources, or any combination thereof. This means that more than 50 percent of the total energy input must be in these categories. In addition, the aggregate use of oil, natural gas, and coal by the facility may not exceed 25 percent of its total energy input

during any calendar year. These fuel use criteria are discussed further in § 292.204(b).

Thirdly, a small power production facility will not be eligible for qualifying status if more than 50 percent of the equity interest in the facility is held by an electric utility or public utility holding company or any person owned by either. Section 292.206 describes this ownership test in greater detail.

One commenter raised the question as to whether a facility is included within the definition of a small power production facility in the statute, and hence the Commission's regulations, if the facility is only part of the process of producing electric energy; namely, raising steam. This commenter produces steam using municipal solid waste, which steam is then sold through an adjoining wall to an electric utility to run through a turbine and produce electricity. In a sense, this facility indirectly produces electric energy. It is unclear to the Commission how this steam-raising facility would benefit from the regulations under section 210. It is not selling electric energy to the utility; it may be buying some electric energy from the utility; and it seems unlikely that it would be subject to electric utility regulation. Therefore, the Commisson does not, at this time, see the need to allow qualification for these kinds of facilities, without judging as to whether the Commission could allow such qualification under the statute.

§ 292.203(b) *Cogeneration facilities.*

Section 292.203(b) provides that, with the exception of new diesel cogeneration facilities, a cogeneration facility may be a qualifying facility if it satisfies two requirements. First, it must meet the same ownership test as that required for a small power production facility. Secondly, it must meet any operating and efficiency standards described in § 292.205(a) and (b).

In addition, cogeneration facilities which wish to qualify for the incremental pricing exemption permitted under Title II of the Natural Gas Policy Act of 1978 (NGPA) and Part 282 of the Commission's rules must meet the requirements stated in § 292.205(c).

Section 201 of PURPA provides that "a 'qualifying cogeneration facility' means a facility which—(i) the Commission determines, by rule, meets such requirements (including requirements respecting minimum size, fuel use, and fuel efficiency) as the Commission may, by rule, prescribe . . .". Several comments contended that the statutory language *requires* the Commission to establish standards relating to all of the mentioned criteria. The legislative history of this section indicates that the phrase "as the Commission may . . ." was added in conference; it did not appear in either the House or Senate bill.[10] The plain meaning of the provision, as adopted by the Conferees, is that a qualifying cogeneration facility must meet requirements that the Commission, in its discretion, establishes. These may, but need not, include requirements respecting minimum size, fuel use, and fuel efficiency.

The Commission received numerous comments from utilities recommending that oil- and natural gas-fired cogeneration facilities not be considered eligible for qualifying status. These commenters generally argued that encouragement of such facilities would be contrary to Congressional intent and national energy policy. Comments were also received expressing strong support for the policy presented in the proposed rule, which did not impose a restriction on oil and natural gas use.

The Commission believes the policy expressed in the proposed rules is consistent with Congressional intent and national energy policy. Had Congress not intended that the benefits of qualifying status be extended to oil- and natural gas-fired cogeneration facilities, the statute or Joint Explanatory Statement of the Committee on Conference (Conference Report) would have contained a restriction on fuel use similar to that which is provided for small power producers. The Congress knew that cogeneration facilities typically use natural gas and oil. In addition, the Natural Gas Policy Act of 1978 contains an express exemption from the incremental pricing program for natural gas used in qualifying cogeneration facilities, which

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10 See Comparative Print to H.R. 4018, Public Utility Regulatory Policies Act, 72, 95th Cong., 2d Sess. (1978).

further indicates Congressional recognition that cogeneration facilities use natural gas.

Thirdly, the Congress enacted the Powerplant and Industrial Fuel Use Act (PIFUA) at the same time as PURPA. PIFUA provides authority to the Security of Energy to restrict the use of oil and gas in cogeneration facilities. Therefore, the Commission does not believe it necessary or appropriate to require an additional layer of fuel use regulation on technologies which the Commission is charged with encouraging and for which another agency has authority to restrict fuel use.

The Commission also notes that the findings in section 2 of PURPA specifically require "a program providing for . . . increased efficiency in the use of facilities and resources . . .". To the extent that oil- and natural gas-fired cogeneration facilities provide for more efficient use of these resources, the Commission believes that the benefits of qualifying status should be extended to them.

Some of the comments stated that permitting qualifying cogeneration facilities to use oil, especially in diesel engines, will use up available air quality increments, thereby preventing the conversion of large utility oil-fired boilers to coal. As noted above, the Commission believes it is not proper to address this fuel use issue within the context of this program. However, the Commission has not made a final determination regarding the environmental effects of new diesel cogeneration facilities, and is therefore including in these regulations an interim exclusion from qualification of this technology until work on an environmental impact statement has been completed.

§ 292.203(c) *Interim exclusion.*

Section 292.203(c) provides that, pending further Commission action, any cogeneration facility which is a new diesel cogeneration facility may not be a qualifying facility. A new diesel cogeneration facility is described as a cogeneration facility which derives its useful power output from a diesel engine, the installation of which began on or after March 13, 1980.

Through the issuance of these rules and the rules implementing section 210 of PURPA, the Commission intends to carry out the legislative mandate to provide encouragement to the energy technologies included within the program. The Commission is required under the National Environmental Policy Act of 1969 (NEPA) to take the environmental effects of this encouragement into account. The Commission has circulated and received public comment on a preliminary Environmental Assessment (EA) of these rules which was issued October 19, 1979. (See Appendix I)

Environmental Findings

The identification of the environmental effects associated with a "major Federal action"[11] is not ordinarily a difficult task. These effects typically are those associated with the construction and operation of a particular project in which the Federal government is playing a major role, such as by funding or licensing. In contrast, these rules and the rules implementing section 210 of PURPA do not authorize or fund any particular projects; moreover, they do not authorize or forbid the use of certain fuels. Instead, they provide certain economic incentives to, and remove other disincentives (*i.e.*, assurance of a market for electrical production and exemption from utility regulation) from certain classes of technologies. It is important to note that, even without these rules, these technologies have been, and would continue to be, utilized. The environmental effects associated with this "base-case" level of development cannot be ascribed to these rules. Instead, the proper way to isolate and identify the effects of these rules is to predict the "base-case" (no PURPA) level of development, and determine the environmental effects of that level of development, and compare it to the effects of the projected development with these rules in place. Under this approach, any changes from the base-case review are properly classified as effects of these rules.

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11 Section 102(2)(c) of the National Environmental Policy Act of 1969, Pub. L. 91-190.

The first step used in determining the environmental effects of these rules was to compare, by region, representative electric utility rates with the cost of generating electricity by use of a qualifying facility. This comparison established which technologies would be economically viable. Next, the costs of generating electricity by the facility were compared to an estimate of utilities' avoided costs on a regional basis. If, by receiving the avoided cost for its output, a facility would operate economically, it was considered to have been "PURPA-induced." Avoided costs is the maximum price inducement under this program.

For technologies which would, as a result of PURPA, be economic, regional levels of market penetration were established on the basis of site availability and manufacturing capability. Finally, the environmental effects associated with the predicted level of development were calculated.

The Environmental Assessment accompanying this order describes the environmental effects associated with all of the types of technologies encompassed in section 201 of PURPA. The quantitative effects associated with the predicted market penetration of each technology were then estimated.

The Environmental Assessment includes an extensive market-penetration analysis of each technology eligible for qualification under the Commission's proposed rules and of the aggregate of all of these technologies. Since the proposed rules took the broadest view of which technologies would be eligible for qualification, the analysis covers all technologies, which, under the statute, may be eligible for qualification. On the basis of this analysis, the Commission has estimated the amount of capacity expected to be induced on a regional and national basis through January 1, 1995, assuming the broadest implementation of this program.

This analysis shows that this program may result in the construction of 12,000 MW of new capacity by qualifying facilities by 1995, and the reduction in utility construction of 10,000 MW of new capacity. It also indicates a possible fuel savings in 1995 of 40,000 bbl/day of oil, 40,000 bbl/day equivalent of natural gas, and 120,000 bbl/day equivalent of

coal, as the use of renewable resources increases, and more efficient use is made of both renewable and non-renewable resources.

The Environmental Assessment finds that there will be both adverse and beneficial environmental effects associated with this program. Some of the technologies produce certain air emissions, water effluents, and other environmental effects. However, material and thermal by-products of industrial, commercial, agricultural and other activities that would otherwise contribute to environmental degradation will be consumed or otherwise utilized in the production of useful energy under this program.

In addition, the Environmental Assessment indicates that utilities will be able to defer or cancel construction of certain facilities, originally scheduled for construction between 1980-1995. These deferrals or cancellations are expected to include some eleven 500 MW coal-fired steam plants, one 1,000 MW nuclear plant, a number of 75 MW gas turbines, and certain large scale hydropower and combined cycle installations. The environmental impacts associated with the construction and operation of these facilities would be avoided.

Finally, the market-penetration analysis in the Environmental Assessment indicates that the incentives provided by this program will not significantly affect the development of some technologies while they will significantly encourage others. For example, it appears that this program will significantly encourage small hydroelectric power development. Water power project impacts are usually site-specific and localized, with no cumulative impact on a national basis, and few impacts of regional significance. The Commission notes that hydroelectric projects in almost all cases must be licensed by the Commission. License applications are evaluated on a case-by-case basis to determine the significance of the environmental impacts and the need for a site-specific EIS. In addition, impacts of individual projects on a waterway may be cumulative, and the Commission reviews each project in relation to others on the waterway under the "comprehensive development" standard of section 10(a) of the Federal Power Act. Therefore, even

though only the general nature of the kinds of environmental effects can be evaluated in this programmatic environmental assessment of national scope, requirements of the National Environmental Policy Act of 1969 (NEPA) will be met as each application is filed.

For certain other technologies, the level of environmental effects associated with the PURPA-induced market penetration of these technologies will not approach a significant level in the near term.[12] The Commission will monitor the PURPA-induced market penetration of these technologies carefully.

In the public comments, evidence was presented indicating that the environmental consequences of qualifying new diesel cogeneration may be significant in the near term, in certain geographic areas, even with a moderate level of market penetration. Therefore, the Commission believes that it is appropriate to delay action on qualification of new diesel cogeneration until completion of an EIS. The Commission will circulate a draft EIS within the next month and conclude its analysis within 90 days of circulation.

The Commission acknowledges the difficulties in identifying the levels of the environmental effects associated with the programmatic encouragement and deregulation of various types of technologies as are present under this program. There are, of course, a great number of uncertainties in any such analysis. However, the Commission is required under NEPA to assess these effects to the fullest extent possible.

On the basis of its environmental review, the Commission has made the following findings in its Environmental Assessment:

—The program, taken as a whole, will not have a significant impact on the quality of the human environment within the meaning of section 102 of NEPA. The Commission also has noted certain beneficial environmental impacts that may result from this program.

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12 See Figures 3 through 7 in the Environmental Assessment.

—Where the expected market penetration of technologies which could qualify under this program is not expected to cause any significant environmental effects in the near term, the Commission will allow qualification of these technologies without delay.

—Where a technology is expected to cause significant environmental effects in the near term, an EIS covering the technology will be prepared and considered before the Commission acts on qualification.

—The Commission is establishing a monitoring program to alert the Commission to the likelihood or extent of market penetration by technologies which qualify under this program. This is designed to produce information that may be relevant to taking appropriate environmental protection action in the future before the program reaches a stage of investment or commitment to implementation likely to determine subsequent development or restrict later alternatives.

§ 292.204(a) *Criteria for qualifying small power production facilities.*

Section 292.204 sets forth qualification requirements for small power production facilities. Paragraph (a) implements the statutory requirement that the power production capacity of a small power production facility not exceed 80 megawatts at any site. In order to implement this limitation, the proposed rules provided that the capacity of all facilities which use the same energy resource, are owned by the same person, and are located within one mile of each other be added together. Commenters recommended eliminating the site criterion because the important criterion is not siting but that facilities use alternate energy resources. Commission recognizes the difficulty in prescribing site criteria for purposes of calculation of the size of the facility, the Commission is obligated under the statute to limit qualifying status for small power production facilities to those facilities which have "a power production

capacity which, together with any other facilities located at the same site (as determined by the Commission), is not greater than 80 megawatts."[13]

In subparagraph (2)(i), the Commission defines "facilities located at the same site" as facilities located within one mile of the facility for which qualification is sought. Hydroelectric facilities (within this distance) are considered to be located at the same site only if the facilities use water from the same impoundment for power generation. The Commission views this additional provision for hydroelectric facilities as necessary because use of the one-mile rule alone might discourage the development of facilities on separate waterways which are within one mile of each other or of closely-spaced impoundments on an individual stream.

The Commission also notes that in some instances hydropower resources may be developed without an impoundment. In this case, the one-mile rule would be the only factor in determining the size of a facility.

In response to comments, the Commission has added subparagraph (2)(ii) which requires, for purposes of determining the distance between facilities, that any measurement shall be made from the electrical generating equipment of a facility. The comments noted that some facilities may include equipment for gathering energy to be used in the facility which may extend up to a number of miles from the generating facility. The Commission believes that the one-mile limit should be measured from the generating facilities.

The proposed rule enabled an applicant to rebut the presumption that facilities located within one mile of the facility for which qualification is sought, using the same energy resource and owned by the same peson, should be considered to be located at the same site. The Commission believes that the requirement to rebut the presumption was burdensome and confusing. Therefore, the final rule has been revised to enable a small power producer or cogenerator to apply to the Commission for a waiver for good cause.

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13 Section 3(17)(A)(i) of the Federal Power Act.

The proposed rule also contained a minimum size limit of 10 kW for qualification of small power production facilities. This proposal was based on the Commission's view that facilities smaller than 10 kW were unlikely to be economically viable, and that the administrative burden of arranging interconnected operation with them would be greater than the benefits they would provide to the system at this time. This proposal attracted considerable comment, both at the public hearings and in written recommendations. The majority of the comments objected to the minimum size provision and indicated that a number of facilities smaller than 10 kW are being built and that some units are presently commercially available. Commenters also stated that these facilities can be equipped with electrical protection equipment which permits safe interconnected operation.

Several utilities, on the other hand, suggested raising the minimum size limit, arguing that small facilities are not cost-effective. The Commission notes that the rules implementing section 210 of PURPA (Subpart C of this part) require that standard rates be provided for facilities up to 100 kW. Those rules together with the self-qualification provisions of these rules greatly ease the administrative burdens on all parties. The Commission also notes that the rules implementing section 210 of PURPA require that a qualifying facility is obligated to pay any interconnection costs assessed against it by the State regulatory authority or nonregulated electric utility. Since under these rules the utility is not obligated to incur any additional costs by reason of interconnected operation with these facilities, the minimum size limitation has been eliminated to allow individual decisions to govern whether or not to install these very small facilities.

§ 292.204(b) *Fuel Use.*

Paragraph (b) sets forth fuel use requirements for qualifying small power production facilities. In the proposed rule, the term "primary energy source" was not defined. Several commenters noted this fact and asked that the final rules specify a

definition for the term. Subparagraph (1) provides that the primary energy source of the facility must be biomass, waste, renewable resources, or any combination thereof, and more than 50 percent of the total energy input must be from these sources. The Commission notes that this requirement is not intended to force small power producers to continually monitor the energy input, but rather that reasonable estimates based on sampling methods are sufficient.

Qualifying small power facilities using biomass as a primary energy source are treated differently then [sic] are facilities using other resources for purposes of exemption from the Public Utility Holding Company Act and certain State law and regulation section 210(e) of PURPA and under § 292.602 of the Commission's regulations. A further concern in determining a facility's primary energy source is the treatment of mixtures of biomass and waste or renewable resources. Therefore, in subparagraph (1), the Commission specifies that any primary energy source which, on the basis of its energy content, is more than 50 percent biomass shall be considered biomass. In other words, a qualifying facility may be considered biomass-fired if, on an estimated annual basis, at least half the energy input, exclusive of fossil fuel use, is biomass.

The Commission expects that this rule will extend the benefits of the biomass exemption provisions to a broad range of facilities. For example, evidence presented in this rulemaking indicated that much more than half of the energy content in municipal solid waste is due to "organic material not derived from fossil fuels," or "biomass" under the Commission's definitions. Thus, a small power production facility fired with municipal solid waste may be considered a biomass facility. The same treatment applies to facilities fired with forest-industry residues, sewage sludge, or peat.

Another aspect of what constitutes "primary energy source" is a specification of what fuels may be used in addition to the primary energy source for purposes of ignition, startup, testing, flame stabilization and control, and during equipment outages and emergencies.

Section 3(17)(B) of the Federal Power Act, as amended by section 201 of PURPA, provides that:

> " 'primary energy source' means the fuel or fuels used for the generation of electric energy except that such term does not include, as determined under rules prescribed by the Commission, in consultation with the Secretary of Energy—
>
> "(i) the minimum amounts of fuel required for ignition, startup, testing, flame stabilization, and control uses, and
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> "(ii) the minimum amounts of fuel required to alleviate or prevent—
>
> "(I) unanticipated equipment outages, and
>
> "(II) emergencies, directly affecting the public health, safety, or welfare, which would result from electric power outages."

The proposed rule set forth limits for the allowable use of fossil fuels. Three separate standards were proposed: one for ignition, startup and testing; another for flame stabilization and control; and a third for fuel use during outages of the primary energy supply system. All of the proposed standards were set in terms of barrels of oil per year per megawatt of rated capacity.

The comments filed on this section generally favored less restrictive fossil fuel limitations. Several commenters noted that standards written in terms of barrels of oil were imprecise, since the energy content of a barrel of oil is not constant. Other commenters argued that separate standards for startup, flame stabilization and outages were unnecessarily burdensome. Commenters claimed that some small power production technologies would be severely constrained by one of the standards, while requiring little or no fossil fuel for other purposes. Additionally, to the extent oil and natural gas remain more expensive than other energy sources available to small power producers, there is an economic disincentive to use oil

and natural gas. Thus it was argued that a single standard for allowable fossil fuel use would be more equitable and workable when dealing with a number of types of facilities. The Commission has decided to adopt this recommendation.

Many other commenters recommended that the Commission adopt alternative amounts of fossil fuel for use during outages and for other purposes. For the purpose of specifying the minimum amounts of fuel under clauses (i) and (ii) of section 3(17)(B) of the Federal Power Act, the Commission adopts in this rulemaking the standard, recommended by several commenters, that no more than 25 percent of the total energy input during any calendar year may consist of fossil fuels—namely oil, natural gas, and coal.

With this simple rule, a qualifying facility can use up to the allowed quantity of fossil fuel for purposes specified in the statute. No question remains concerning what sort of primary fuel system supply outages are within the scope of the rule. The standard does require that a small power producer be able to estimate the energy content of the primary energy source. The Commission recognizes that for some energy sources, municipal solid waste in particular, energy content is not constant. As has been stated earlier, the Commission believes that reasonable estimates will suffice for purposes of this rule. Finally, it should be noted that the fossil fuel limitation applies only to small power production facilities. Some commenters apparently regarded the limitations as equally applicable to cogeneration facilities. This is not the case.

Another issue raised by the proposed rule was the limitation of renewable resources to water used at existing dams. Commenters urged the Commission to expand the definition of renewable resources to include water used at new hydroelectric facilities. The Commission has reviewed the Conference Report and has determined that the Conferees did not intend to restrict the term renewable resources to water used only at existing dams. The Commission believes that such an interpretation conflicts with the conventional use of the term "renewable resources" as including all hydroelectric sources, not just those using existing dams. Therefore, the Commission intends

that the term renewable resources applies to water used at existing and new hydroelectric facilities of less than 80 megawatts.

§ 292.205 *Criteria for qualifying cogeneration facilities.*

§ 292.205(a)(1) *Operating standards for topping-cycle cogeneration facilities.*

In its Notice of Proposed Rulemaking, the Commission recognized the problem of distinguishing cogeneration facilities which achieve meaningful energy conservation from those which are merely "token" facilities, producing trivial amounts of either useful heat or power. In the proposed rules, the *bona fide* character of a facility was to be determined by minimum amounts of useful heat and power output.

The need for operating standards as a means of identifying *bona fide* cogeneration facilities drew considerable comment. Some comments indicated that this formulation had the effect of imposing energy efficiency requirements which are not appropriate for some technologies. Commenters stated that a much simpler test than the proposed standards would be adequate for the task. Two commenters suggested a simple test regarding the portion of energy developed in the form of useful heat or steam. One potential qualifying facility[14] suggested that:

> for geothermal energy cogeneration facilities, the energy utilization by the non-electric processes must average on an annual basis at least 5 percent of the energy consumption of the heat engine.

Another commenter suggested "a minimum of 10% of the total steam generation must be used as steam send-out."[15]

Generally, commenters did not oppose a requirement for distinguishing a *bona fide* cogeneration facility from essentially

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14 Republic Geothermal, Inc.

15 Raytheon Corporation.

single purpose facilities, even while taking exception to the form and substance of the proposed efficiency standards. One commenter[16] stated:

> A significant portion of the steam, heat or energy available from the cogeneration unit should be used in an industrial, commercial, heating or cooling applications. The concept of an operator of a large thermal generating station applying condensing techniques taking a tiny side stream out to heat a tool shed so that cogeneration could be claimed should be prohibited.

The Department of Energy[17] recommended the inclusion of a requirement that some minimal fractions of useful heat and power be produced.

Consequently, the Commission has decided that a simple means of identifying *bona fide* cogeneration facilities is appropriate. The *bona fide* test has been modified to specify only that a minimum proportion of the useful energy output be useful thermal energy output without regard to the energy input. The standard requires that at least 5 percent of a qualifying cogeneration facility's total energy output be in the form of useful thermal energy output. Compliance with this standard is to be based on estimated annual energy output.

Further, this basic *bona fide* test is applicable only to topping-cycle facilities. "Tokenism" is of concern for bottoming-cycle facilities chiefly with regard to the opportunity for qualifying facilities to obtain exemption from incremental pricing under the Natural Gas Policy Act. Natural gas used by bottoming-cycle facilities (other than in supplementary firing) will, as a general matter, be exempt from incremental pricing only to the extent that reject heat is utilized in power production. In view of these provisions, no separate *bona fide* test is necessary.

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16 This commenter, Potlatch Corporation, proposed as a test that at least 25 percent of the steam, or useful energy, available be applied on an annual basis in industrial, commercial, heating or cooling uses.

17 The Economic Regulatory Administration.

§ 292.205(a)(2)(i) *Efficiency standards for topping-cycle facilities.*

The proposed rules set forth efficiency standards for oil- and gas-fired topping-cycle cogeneration facilities. The efficiency standards were composed of three separate criteria. The first criterion required, in effect, that no less than 20 percent of the energy input to the facility be converted to mechanical or electrical power. The second criterion specified that 45 percent of the heat rejected from the heat engine (a term used in the proposed rule to describe the power production process) be put to use in a thermal process. The final criterion required at least 60 percent of the energy input to the facility to be used either as power or useful heat.

Comments on the proposed efficiency standards criticized both their form and substance. Many commenters stated that the 20 percent efficiency criterion for heat engines was overly restrictive. These commenters pointed out that most steam turbines would not be able to meet the standard with conventional steam inlet and exhaust pressures. Many such steam turbine cogeneration systems would represent energy efficient systems when compared to the standard practice of separate steam and electricity production.

Fewer comments were directed toward the efficiency tests concerning heat recovery and overall efficiency. The comments that were made, however, indicated a need for revision. One commenter indicated that the heat recovery standard would exclude diesel-powered cogeneration facilities even though many such facilities would be highly energy efficient. Comments on the overall efficiency standards were mixed. One commenter suggested that the standard was too lenient. Another commenter recommended that the proposed 60 percent test be reduced to 50 percent, although this commenter appeared to be principally concerned with the application of efficiency standards to the use of renewable resources and not to the use of scarce fuels.

Five commenters addressed the question of efficiency standards for oil- and natural gas-fired cogeneration in a compre-

hensive manner by proposing a complete set of alternative standards. Four of these five commenters advanced proposals based on energy balance criteria, similar in theory to the proposed standards. A proposal by the New York State Energy Office closely resembled the proposed rule. Under this plan, individual tests for heat engine efficiency, heat recovery, and overall efficiency would still be required. The overall efficiency test would remain at 60 percent, but the heat engine and heat recovery tests would be reduced to 10 percent. This was the only comment in favor of maintaining separate efficiency standards for power production and heat recovery. The criticism of that scheme has caused the Commission to adopt an alternative efficiency standard which better takes into account the variety of technologies which qualify under this rule. The essential issue concerns the proper level of the overall efficiency standard which should be applied in individual cases.

Three commenters proposed efficiency standards relating solely to overall efficiency. A utility[18] recommended a single standard of 50 percent overall efficiency, which was the most lenient standard suggested. This proposal, furthermore, would be related to design efficiency and not actual or estimated operating efficiency. Another commenter[19] recommended a single standard of 65 percent overall efficiency. This standard would be slightly stricter than the first proposal discussed for all facilities except those producing predominantly either electricity or heat. Finally, the Commonwealth of Massachusetts Office of Energy Resources proposed a standard which would weight thermal energy with only half the value of electricity.

The latter two comments are both supported by well-reasoned examples of cogeneration engineering practice. The Massachusetts proposal is relatively more stringent for facilities producing more heat than electricity, and more lenient for facilities producing much of their output as electricity. The basis for this proposal is a comparison of cogeneration systems based on steam turbine, combustion turbine, and diesel engine

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18 Brooklyn Union Gas Company.

19 Mechanical Technology Incorporated.

prime movers with oil-burning non-cogeneration technology. Essentially, it is argued that any cogeneration facility meeting the proposed efficiency standard will be more efficient than any combination of separately generated electricity and steam using efficient, state-of-the-art technology. By requiring that the sum of useful power output and one-half the useful thermal output be greater than 45 percent of the facility's energy consumption, this proposal would ensure that qualifying facilities produce heat and power more efficiently than a [sic] 8500 Btu/kWh combined cycle generating station and a 90 percent efficient process steam boiler.

Moreover, this proposal appears to impact the various cogeneration technologies more equitably than the other proposed standards. The other proposals for required overall efficiency, by simply summing heat and power on an equal basis, make qualification relatively easy for steam turbine systems which produce little electricity. Cogeneration systems which produce high ratios of electricity to heat would be penalized with difficult heat recovery requirements. Yet the systems with high electricity to heat ratios have the highest "second law" energy efficiencies. Furthermore, a standard which is relatively lenient towards oil- and natural gas-fired steam cogeneration would encourage boiler fuel use of distillate oil and natural gas.

The proposal of another commenter, although considered in detail, would impact different cogeneration technologies differently and would not give assurance of energy conservation.[20]

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20 The efficiency standard proposed by this commenter, the American Paper Institute, differed from all others fundamentally in that an effective heat rate test was required. A qualifying cogeneration facility was defined as:

> A cogeneration facility that for the electric energy produced incrementally to steam or useful energy production:
>
> 1. uses less than 9,000 BTU of additional fuel per kilowatt hour and
>
> 2. produces more electric energy than it consumes
>
> and that at least twenty-five percent of the steam, or useful energy, available is applied on an annual basis in industrial, commercial, heating or cooling uses.

In light of the foregoing considerations, the Commission has decided to adopt a standard in paragraph (a)(2)(i) similar to that proposed by the Massachusetts Office of Energy Resources as its standard for efficiency of new oil- and natural gas-fired topping-cycle cogeneration systems. This standard requires that for any topping-cycle cogeneration facility for which any of the energy input is natural gas or oil and the installation of which began on or after March 13, 1980,[21] the useful power output plus one-half the useful thermal energy output of the facility must be, during any calendar year, no less than 42.5 percent of the energy input of natural gas and oil to the facility. The Commission adopted a value of 42.5 percent, rather than the 45 percent recommended by the Massachusetts comments because, in the Commission's view, the 45 percent requirement appears overly restrictive for steam turbine cogeneration facilities in that very high boiler efficiencies would have been required. However, if the useful thermal energy output of any such facility is less than 15 percent of its total energy output, the useful power output plus one-half the useful thermal energy output of the facility must be no less than 45 percent of the total energy input of natural gas and oil to the facility.

Existing Versus New Cogeneration Facilities

Although the Commission has found a compelling reason to impose efficiency standards on new oil and gas burning cogeneration facilities, the situation with respect to existing facilities is different. Existing facilities are those for which the installation of the cogeneration equipment began before the

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21 The preamble discusses new versus existing facilities. This is expressed in the regulations as "facilities, the installation of which began on or after March 13, 1980," or before that date. The Commission views the beginning of installation as the beginning of physical modification of the site or of pre-existing facilities. Of course, any sharp line will create its own inequities and raise its own questions. The waiver provision of § 292.205(d) is available to redress those inequities, and the optional procedure for qualification under § 292.207(b) is available to answer those questions.

Commission actions encouraging cogeneration under this program were finalized. Presumably, such facilities would continue to be installed or operated using whatever fuels they are equipped to burn, with or without the incentives of PURPA.

Allowing existing facilities to qualify will provide for more flexible operation of the facilities. Optimum efficiency of a cogeneration facility may be more easily approached through interconnected operation with an electric utility. Because of the foregoing considerations, denial of qualifying status would serve no useful purpose.

Existing cogeneration facilities burning oil or natural gas were, in large measure, installed in an environment of lower fuel prices. Such facilities may not be able to meet the higher standards now reasonable for use of scarce fuels. Yet failure to meet standards intended for new facilities should not preclude entitlement to sell power to the utility and to receive the other rate benefits, as provided under Subpart C of these rules. In addition, the denial of exemption from regulation as an electric utility may discourage cogeneration at existing facilities.

The Commission has decided against imposing any efficiency standards on existing facilities, regardless of energy source. There is no assurance that imposing standards would result in fuel savings. The opposite result is more likely, if operating cogeneration facilities are denied the benefits of interconnected operation with an electric utility. Therefore, for any cogeneration facility, the installation of which began before the date the Commission's final rules in this docket were issued, March 13, 1980, no efficiency standards are required for qualification, regardless of energy source or whether it is a topping or bottoming-cycle facility.

Efficiency to be Based Upon Projected Annual Operation

Several commenters raised the issue of whether efficiency calculations should be based on rated performance characteristics or on expected performance over a period of time. Only half of the commenters that mentioned the issue took a

position in favor of one means of computation or another. The balance of the commenters merely asked for clarification.

The Commission is persuaded that the efficiency of a cogeneration facility operating at peak production of power and heat may not necessarily correlate with the efficiency which can be practically realized. A cogeneration facility which serves a highly variable heating load may seldom be operated at peak efficiency. The efficiency standards required for new oil or natural gas cogeneration facilities are intended to assure efficient use of these premium fuels. Use of optimum or design basis circumstances for determining efficiency would not satisfy the Commission's concern. A computation based upon projected or estimated annual operations will more closely reflect the facility's actual energy conservation potential.

The Commission realizes that estimates will be required in order to determine the efficiency of a facility not yet constructed. The Commission believes, however, that such estimates would routinely be performed prior to any decision to invest in cogeneration equipment. No significant burden is therefore expected in determining a cogeneration facility's qualifying status.

Why the Efficiency Standard Based on "Effective Heat Rates" Was Not Adopted

Evaluating the performance of a cogeneration facility in terms of the quantity of additional fuel used per kilowatt hour of electricity generated, above that needed for heating purposes alone, results in a standard known as the "effective heat rate."[22] This form of efficiency evaluation has been widely used

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22 To compute a cogeneration facility's effective heat rate, an assumption is made that the thermal output of the facility would have to be supplied in any event. A certain quantity of fuel would be needed to satisfy the thermal load in the absence of cogeneration. For example, if a steam turbine topping-cycle cogeneration facility were not installed, a conventional steam boiler would raise the steam. With the topping-cycle system, slightly more fuel is burned to raise steam at a higher pressure than is needed for the thermal process. The steam is expanded in a turbine, generating electricity and exhausting steam at the proper pressure for the thermal process. Effective heat rate is computed by dividing the extra energy supplied to the facility by the electricity generated.

to compare cogeneration of electricity to conventional utility generation. For a typical backpressure steam turbine cogeneration facility the effective heat rate of electricity generation may be as low as 4500 BTU/kWh — twice the efficiency of central station utility generation.

The effective heat rate test has some serious drawbacks, however. The test looks only to the efficiency of electricity generation and ignores the balance of the cogeneration facility. While the effective heat rate of a topping turbine may be high, if only a small fraction of the energy produced is in the form of electricity, the overall system is essentially a boiler facility, and the aggregate energy conserved is minimal. Indeed, effective heat rates are most favorable for systems which produce little electricity and a large amount of steam. The effective heat rate is lower for combustion turbine and internal combustion cogeneration, as compared to steam, but such systems produce more electricity per unit of fuel used. When the efficiency of the entire system is computed in such a manner as to credit the quality as well as quantity of energy produced[23], combustion turbine and internal combustion cogeneration systems consistently score higher than steam systems. Thus the effective heat rate test does not truly measure overall system efficiency, and is not an adequate measure of whether, in the aggregate, energy is conserved through cogeneration.

§ 292.205(a)(2)(ii) *Topping-cycle facilities using energy sources other than oil or natural gas.*

In the final rule, the Commission has decided not to impose efficiency standards for qualification of topping-cycle cogeneration facilities using energy sources other than oil or natural gas. The proposed rules contained standards for topping-cycle cogeneration facilities using energy sources other than coal or coal-derived fuels. The efficiency standards were

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23 A Btu of electricity, for example, is worth more than a Btu of low pressure steam. The steam may be used for heat, but it is not useful for lighting or operating a television set. The "Second Law Efficiency" concept accurately reflects the usefulness of various forms of energy.

proposed in response to two concerns. First, some energy sources may be viewed as limited in access. Use of such resources by one cogenerator deprives another, possibly more efficient cogeneration facility, of the opportunity to use the resource. Efficiency standards were proposed in order to ensure that the first cogenerator, to gain access to the resource, would build an efficient facility in the absence of an effective market for the resource.

The second concern dealt with a means of distinguishing a *bona fide* cogeneration facility from a small power production facility with incidental recovery and use of steam or heat. The Commission believed that some means was necessary to prevent small power production facilities from evading the statutory size limits. A standard setting forth minimum production of power and minimum recovery of heat was seen as a means of avoiding the qualification of "token" cogeneration facilities.

Neither concern is, however, relevant to the use of coal as a primary fuel. Coal is not characterized by limited access and it cannot be used as a primary fuel by small power production facilities. Therefore, the proposed rule contained no efficiency standards for facilities fueled by coal.

Most commenters addressing this question stated that the proposed standards were impossible to meet in many instances. More importantly, commenters questioned the basic rationale of applying efficiency standards. The limited access concept is complex, and some commenters missed the point, arguing that such resources are renewable or available in large quantity.

EPA pointed out that the degree to which limited access may affect the sort of facility constructed is unknown. The effects of limited access, if any, are likely to be site specific, and will vary with time. Even if these effects could be spelled out with certainty, the specification of appropriate efficiency criteria would be a difficult task at best. If a standard of thermal efficiency were set without detailed knowledge of both the technologies and patterns of resource development, the probable effect would simply be to stifle development of the resource.

The Commission concludes that the proposed cure is far worse than the suspected ailment. In addition, as we stated in the discussion addressing the operating standards, the 5 percent minimum amount of useful thermal output standard will assure that these facilities are *bona fide* cogenerators under these rules.

§ 292.205(b) *Efficiency standards for bottoming-cycle facilities.*

The proposed rule contained a two-part efficiency standard for bottoming-cycle cogeneration facilities. All facilities, except those using coal or coal-derived fuels, would have been required to meet the standards. The first part of the efficiency standard dealt with the heat engine. In order to qualify, a facility had to either convert 15 percent of the reject heat from the thermal process to mechanical energy, or in the alternative, achieve 40 percent of the ideal Carnot efficiency with the working fluid temperatures experienced. The second part of the standard simply required an overall energy efficiency of 60 percent for the entire facility.

Numerous commenters were critical of the proposed standards. Although a number of issues were addressed, a common concern was the counter-productive nature of efficiency standards for bottoming-cycle cogeneration facilities relying on reject heat. It was argued that because the heat would otherwise be wasted, efficiency standards would serve no fuel conservation purpose. The only effect of efficiency standards would be a limitation on the number of bottoming-cycle facilities which would be constructed.

Moreover, many commenters noted that the overall energy efficiency standard of 60 percent was overly restrictive, and in fact meaningless in many instances. The overall energy efficiency, as defined in the proposed rule, would be determined by the efficiency of the bottoming-cycle heat engine and the efficiency of the industrial thermal process. Typically the latter efficiency is predetermined by the nature of the process and the design of the industrial plant. When bottoming-cycle cogenera-

tion equipment is added to an existing plant, the efficiency of that plant's energy utilization is irrelevant to the effectiveness of the bottoming cycle. Furthermore, the measurement of overall energy efficiency required under the proposed rules would be difficult, since such efficiency measurements are not a conventional practice.

The Commission recognizes the validity of these comments, and has therefore eliminated efficiency standards for most bottoming-cycle cogeneration facilities. The final rule contains an efficiency standard for only those facilities with oil or natural gas supplementary firing. The need for standards in this case was acknowledged by several commenters.

When supplementary firing is used in a bottoming-cycle cogeneration facility, more than reject heat is used to generate electricity. Scarce fossil fuels can be introduced without the inherent efficiency advantages of sequential use. In order to restrict the potential for abuse, the Commission has adopted a simple efficiency test similar to that suggested by one of the commenters. The standard relates only to facilities installation[24] of which began on or after March 13, 1980, and for which any of the energy input as supplementary firing is oil or natural gas. Paragraph (b)(1) specifies that the useful power output of the bottoming cycle must, during any calendar year, be no less than 45 percent of the energy input of natural gas and oil for supplementary firing. The Commission notes that the fuels used in the thermal process "upstream" from the bottoming-cycle facility's power production system are not considered in this efficiency test. The use of the lower heating value, consistent with the proposed rules, is advantageous to cogenerators in that the latent heat of combustion water cannot be effectively recovered by any practical bottoming-cycle technology currently forseeable.

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24 In the case of bottoming-cycle cogeneration in which electric generating equipment is retrofitted to existing sources of industrial reject heat, the date at which installation begins is the date on which the retrofit is begun.

§ 292.205(c) *Exemption from incremental pricing.*

One of the incentives for cogeneration is found not in PURPA but in the Natural Gas Policy Act of 1978 (NGPA). In section 206(c), the Commission is given the discretion to exempt qualifying cogeneration facilities from its incremental pricing program developed under Title II of the NGPA.

On September 28, 1979, the Commission issued final rules implementing the incremental pricing provisions of the Natural Gas Policy Act of 1978.[25] These rules provide, among other things, that natural gas used by "a qualifying cogeneration facility" shall be exempt from the incremental pricing provisons of the NGPA.[26] A qualifying cogeneration facility is defined in the regulations as a cogeneration facility which meets the requirements prescribed by the Commission pursuant to section 201 of the Public Utility Regulatory Policies Act of 1978 (PURPA).[27]

In this paragraph, the Commission has set forth the requirements for exemption from incremental pricing. Paragraph (c)(1) allows that any topping-cycle cogeneration facility which is a qualifying facility under § 292.203(b), and, if not already required to do so, meets the operating and efficiency standards under paragraphs (a)(1) and (2)(i) of this section, or is a qualifying facility under Subpart E of this part, may obtain an exemption from incremental pricing for its natural gas use.

Paragraph (c)(2) enables natural gas used in bottoming-cycle cogeneration facilities and which is not exempt from incremental pricing under Subpart E of this part to obtain exemption under this subpart to the extent that reject heat emerging from the useful thermal energy process is made available for use for power production. The Commission feels that these requirements adequately reflect the goal of PURPA to encourage the efficient use of energy by cogeneration facilities. To the extent

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25 18 C.F.R. Part 282, 44 Fed. Reg. 57226 (Oct. 5, 1979).

26 18 C.F.R. § 282.201(a).

27 18 C.F.R. § 282.202(e).

that a facility makes available its reject thermal energy to produce power, the Commission believes it should obtain the benefit of exemption from incremental pricing.

The Commission does not intend for this subpart to interfere with any exemptions provided under Subpart E. Therefore, paragraph (c)(3) provides that any person who obtained an exemption under Subpart E is not affected by this provision.

Paragraph (c)(4) provides that natural gas used for supplementary firing in any cogeneration facility is not eligible for exemption from incremental pricing under this subpart. However, natural gas used for supplementary firing of a bottoming-cycle facility would be exempt under the Commission's Order No. 49-A, to the extent that the facility generates electricity which is sold to a utility.[28]

When the final regulations under Phase II of incremental pricing take effect and the Commission can then better assess their implications, the Commission may wish to revise the exemptions from incremental pricing granted to cogeneration facilities, including the exemption provided in the Interim Rule under Subpart E.

§ 292.205(d) *Waiver.*

This paragraph provides that the Commission will consider waiving any of the standards described above upon a showing that the facility will produce significant energy savings.

§ 292.206 *Ownership criteria.*

Section 292.206 is designed to implement the statutory requirement that a qualifying small power production facility or cogeneration facility must be owned by a person not primarily engaged in the generation or sale of electric power (other than electric power solely from cogeneration facilities or small power production facilities). Regarding this provision, the Commission notes that the Conference Report states that:

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[28] See Order No. 49-A, issued December 27, 1979, in Docket No. RM79-14, 45 Fed. Reg. 21 (Jan. 2, 1980).

> [e]lectric utilities may participate in an entity which owns such (qualifying small power production or cogeneration) facilities with other persons, and such entity could qualify under these definitions.
>
> The test of this case is whether the entity which owns the facility is primarily engaged in the generation or sale of electric power other than in connection with its ownership of the cogeneration facilities or small power production facilities.[29]

Thus, either directly or through a subsidiary company, an electric utility could participate in the ownership of a qualifying cogeneration or small power production facility.

Several commenters noted that under a literal interpretation of the Conference Report's statement, several electric utilities could form a subsidiary which owned small power production or cogeneration facilities. Such a subsidiary would constitute an entity which is not primarily engaged in the generation or sale of electric power other than in connection with its ownership of cogeneration or small power production facilities. Under such an interpretation, the subject facilities would be eligible to receive qualifying status.

The Commission believes, however, that the thrust of section 201 of PURPA is to limit the advantages of qualifying status to cogeneration and small power production facilities which are not owned primarily by electric utilities or their subsidiaries. The proposed rule provided that if, based on the proportion of ownership by electric utilities, public utility holding companies, or subsidiaries of either, more than 50 percent of the entity which owns the cogeneration or small power production facility is comprised of these electric utility interests, then the facilities are not qualifying facilities. This language has been incorporated into these final rules; the comments on this section provided no sufficient reasons in the Commission's judgment for changing the percentage.

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[29] Conference Report on H.R. 4018, Public Utility Regulatory Policies Act of 1978, H. Rep. No. 1750, 89 95th Cong., 2d Sess. (1978).

The Commission emphasizes the fact that nothing in this program limits the extent of utility ownership or operation of cogeneration or small power production facilities. The Commission notes the statement in the Conference Report that:

> . . . it is also the intention of the conferees that the definition of "qualifying cogeneration facility" and "qualifying small power production facility" will not be construed as prohibiting or discouraging electric utilities from cogenerating.[29]

Utilities may not, however, qualify for the benefits under this program if their ownership interests exceed the limits set forth in this rule.

Both the provisions in section 3(17)(C)(ii) and 3(18)(B)(ii) of the Federal Power Act, as amended by section 201 of PURPA, use the term person in describing who may own a qualifying cogeneration facility and qualifying small power production facility. The Commission has incorporated the ownership criteria under this section of the regulations and has used the term—person—found in the statute.

A few commenters questioned whether a municipality (or any other agency or instrumentality of State or Federal government) falls within the definition of the term "person" as used in definitions (17) and (18) in section 3 of the Federal Power Act. It is the Commission's view that the term "person," for purposes of qualifying under this program, does include municipalities (or any other agency or instrumentality of State or Federal government). This view is supported by case law in which the courts have treated municipalities and other units of State and Federal government as persons under other sections of the Federal Power Act. *See, e.g., United States v. Public Utilities Commission of California,* 345 U.S. 295 (1953); and *New England Power Co. v. FPC,* 349 F.2d 258 (1st Cir. 1965). The cases touching on the issue of these agencies as persons are very expansive (see the *California Public Utility Commission* decision cited above which was decided by the Supreme Court

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[29] Conference Report on H.R. 4018, Public Utility Regulatory Policies Act of 1978, H. Rep. No. 1750, 89-90, 95th Cong., 2d Sess. (1978).

in 1953). Therefore, under past practice, the Commission and the courts have not interpreted "person" to exclude a municipality or other unit of State and Federal government from the benefits of any action of the Federal Power Act.

In addition, in that there is no indication that the Congress meant to deny qualification to these agencies or instrumentalities, the Commission finds no policy grounds for denying these agencies or instrumentalities qualifying status. Therefore, both as a matter of law and as a matter of policy, the term "person" as used in section 3 (17)(C)(ii) and 3(18)(B)(ii) includes these agencies or instrumentalities. The effect of this is to allow these agencies or instrumentalities the opportunity to participate in this program if they otherwise meet the standards for qualification set out in this subpart.

§ 292.207 *Procedures for obtaining qualifying status.*

This section sets forth the procedures for obtaining qualifying status. Paragraph (a)(1) provides that a small power production facility which meets the criteria for qualification set forth in § 292.203 is a qualifying facility. As discussed above, the Commission has eliminated the mandatory case-by-case qualification procedure contained in the proposed rule.

Paragraph (a)(2) requires any owner or operator of a facility qualifying under paragraph (a)(1) to furnish notice to the Commission. The contents of the notice shall contain the information required of an applicant for qualifying status in paragraph (b)(2)(i) through (b)(2)(iv) described below. The Commission is requiring such notice for purposes of monitoring the market penetration of qualifying facilities, in compliance with its responsibilities under the National Environmental Policy Act of 1969, as previously discussed in this preamble.

Paragraph (b) provides an optional procedure whereby the owner or operator of a small power production facility or cogeneration facility may, should it prove desirable, file an application with this Commission for certification that the facility is a qualifying facility. The application must contain

enough information to enable the Commission to make an accurate finding that the facility should or should not be certified.

Specifically, paragraph (b)(i) through (v) provides that each application must contain the name and address of the applicant and the location of the facility, a brief description of the facility including a statement indicating whether such facility is a small power production facility or a cogeneration facility, the primary energy source used by the facility, the rated power production capacity of the facility, and the percentage of ownership by electric utilities, or public utility holding companies, or by any persons owned by either.

Applications by owners or operators of small power production facilities must also contain the location of the facility in relation to any other small power production facilities within one mile of the facility owned by the applicant which use the same energy resources, and information identifying any planned usage of natural gas, oil or coal.

An application by a cogenerator must contain the date installation of the facility commenced, a description of the cogeneration facility, including whether the facility is a topping or bottoming cycle, and sufficient information to determine that any applicable efficiency or operating requirements have been met.

Paragraph (b)(5) sets forth the procedures to be used by the Commission to determine whether a facility is to be granted qualifying status. It provides that, within 90 days of the filing of a complete application, the Commission shall issue an order granting or denying the application, extending the time for issuance of an order, or setting the matter for hearing. If no order is issued within 90 days of the filing of the application, it shall be deemed to have been granted.

The Commission will rely on its existing procedures for any person to file a petition for reconsideration of any Commission action instead of employing the protest procedure contained in the proposed rule.

Several commenters, while offering support for the elimination of filing and notice requirements for smaller facilities,

acknowledged the useful purpose that would be served by a requirement that a larger facility give notice to the affected utility of its qualifying status and its intention that such utility purchase its power. Accordingly, the Commission has provided a requirement in paragraph (c) that an electric utility is not required to purchase electric energy from a facility with a design capacity of 500 kilowatts or more until 90 days after the facility notifies the utility that it is a qualifying facility, or 90 days after the facility has applied to the Commission under paragraph (b).

Paragraph (d)(1) provides that the Commission may revoke the qualifying status of a facility if it ceases to comply with any of the statements contained in its application for Commission certification. The Commission may do so on its own motion, or upon a motion to reconsider any certification previously granted. In either case, the Commission will act only after providing an opportunity for a hearing. Paragraph (d)(2) provides that, prior to undertaking any substantial alteration of a qualifying facility, a small power production or cogenerator may, should it prove desirable, apply to the Commission for a determination that the facility, as modified, will retain its qualifying status.

IV. EFFECTIVE DATE

The Conference Report indicates that rules respecting criteria for qualifying facilities be prescribed "as soon as practicable" in order that persons may ascertain in advance of construction or operation of any facility whether or not such facility will meet the criteria established. The Commission believes, therefore, that good cause exists under 5 U.S.C. § 553(d) to make the rules promulgated in this order effective immediately.

These rules have been promulgated under the Federal Power Act, as amended by PURPA, and, therefore, a right to rehearing exists under section 313 of the Federal Power Act.

(Public Utility Regulatory Policies Act of 1978, 16 U.S.C. § 2601, *et seq.*, Energy Supply and Environmental Coor-

dination Act, 15 U.S.C. § 791 *et seq.*, Federal Power Act, as amended, 16 U.S.C. § 792 *et seq.*, Department of Energy Organization Act, 42 U.S.C. § 7101 *et seq.*, E.O. 12009, 42 F.R. 46267, Natural Gas Policy Act of 1978, 15 U.S.C. § 3301, *et seq.*)

In consideration of the foregoing, the Commission amends Part 292 of Chapter I, Title 18, Code of Federal Regulations, as set forth below, effective immediately.
By the Commission.

(SEAL)

KENNETH F. PLUMB,
Secretary.

1. Part 292 of Subchapter K is amended by adding a new Subpart B to read as follows:

SUBPART B — QUALIFYING COGENERATION AND SMALL POWER PRODUCTION FACILITIES

Sec.

292.201 Scope.
292.202 Definitions.
292.203 General requirements for qualification.
292.204 Criteria for qualifying small power production facilities.
292.205 Criteria for qualifying cogeneration facilities.
292.206 Ownership criteria.
292.207 Procedures for obtaining qualifying status.

(Authority: This part issued under the Public Utility Regulatory Policies Act of 1978, 16 U.S.C. § 2601, *et seq.*, Energy Supply and Environmental Coordination Act, 15 U.S.C. § 791 *et seq.*, Federal Power Act, as amended, 16 U.S.C. § 792 *et seq.*, Department of Energy Organization Act, 42 U.S.C. § 7101 *et seq.*, E.O. 12009, 42 F.R. 46267, Natural Gas Policy Act of 1978, 15 U.S.C. § 3301 *et seq.*)

SUBPART B — QUALIFYING COGENERATION AND SMALL POWER PRODUCTION FACILITIES

§ 292.201 *Scope.*

This subpart applies to the criteria for and manner of becoming a qualifying small power production facility and a qualifying cogeneration facility under sections 3(17)(C) and 3(18)(B), respectively, of the Federal Power Act, as amended by section 201 of the Public Utility Regulatory Policies Act of 1978 (PURPA).

§ 292.202 *Definitions.*

For purposes of this subpart:

(a) "biomass" means any organic material not derived from fossil fuels;

(b) "waste" means by-product materials other than biomass;

(c) "cogeneration facility" means equipment used to produce electric energy and forms of useful thermal energy (such as heat or steam), used for industrial, commercial, heating, or cooling purposes, through the sequential use of energy;

(d) "topping-cycle cogeneration facility" means a cogeneration facility in which the energy input to the facility is first used to produce useful power output, and the reject heat from power production is then used to provide useful thermal energy;

(e) "bottoming-cycle cogeneration facility" means a cogeneration facility in which the energy input to the system is first applied to a useful thermal energy process, and the reject heat emerging from the process is then used for power production;

(f) "supplementary firing" means an energy input to the cogeneration facility used only in the thermal process of a topping-cycle cogeneration facility, or only in the electric generating process of a bottoming-cycle cogeneration facility;

(g) "useful power output" of a cogeneration facility means the electric or mechanical energy made available for use,

exclusive of any such energy used in the power production process;

(h) "useful thermal energy output" of a topping-cycle cogeneration facility means the thermal energy made available for use in any industrial or commercial process, or used in any heating or cooling application;

(i) "total energy output" of a topping-cycle cogeneration facility is the sum of the useful power output and useful thermal energy output;

(j) "total energy input" means the total energy of all forms supplied from external sources other than supplementary firing, to the facility;

(k) "natural gas" means either natural gas unmixed, or any mixture of natural gas and artificial gas;

(l) "oil" means crude oil, residual fuel oil, natural gas liquids, or any refined petroleum products; and

(m) energy input in the case of energy in the form of natural gas or oil is to be measured by the lower hearing [sic] value of the natural gas or oil.

§ 292.203 *General requirements for qualification.*

(a) *Small power production facilities.* A small power production facility is a qualifying facility if it:

(1) meets the maximum size criteria specified in § 292.204(a);

(2) meets the fuel use criteria specified in § 292.204(b); and

(3) meets the ownership criteria specified in § 292.206.

(b) *Cogeneration facilities.* (1) Unless excluded under paragraph (c), a cogeneration facility is a qualifying facility if it:

(i) meets any applicable operating and efficiency standards specified in § 292.205(a) and (b); and

(ii) meets the ownership criteria specified in § 292.206.

(2) For purposes of qualification of a cogeneration facility for exemption from incremental pricing, a cogeneration facility must qualify under § 292.205(c).

(c) *Interim exclusion.* (1) Pending further Commission action, any cogeneration facility which is a new diesel cogeneration facility may not be a qualifying facility.

(2) A new diesel cogeneration facility is a cogeneration facility:

(i) which derives its useful power output from a diesel engine, and

(ii) the installation of which began on or after March 13, 1980.

§ 292.204 *Criteria for qualifying small power production facilities.*

(a) *Size of the facility.* (1) *Maximum size.* The power production capacity of the facility for which qualification is sought, together with the capacity of any other facilities which use the same energy resource, are owned by the same person, and are located at the same site, may not exceed 80 megawatts.

(2) *Method of calculation.* (i) For purposes of this paragraph, facilities are considered to be located at the same site as the facility for which qualification is sought if they are located within one mile of the facility for which qualification is sought and, for hydroelectric facilities, if they use water from the same impoundment for power generation.

(ii) For purposes of making the determination in clause (i), the distance between facilities shall be measured from the electrical generating equipment of a facility.

(3) *Waiver.* The Commission may modify the application of subparagraph (2) for good cause.

(b) *Fuel use.* (1)(i) The primary energy source of the facility must be biomass, waste, renewable resources, or any combination thereof, and more than 50 percent of the total energy input must be from these sources.

(ii) Any primary energy source which, on the basis of its energy content, is 50 percent or more biomass shall be considered biomass.

(2) Use of oil, natural gas, and coal by a facility may not, in the aggregate, exceed 25 percent of the total energy input of the facility during any calendar year period.

§ 292.205 *Criteria for qualifying cogeneration facilities.*

(a) *Operating and efficiency standards for topping-cycle facilities.*

(1) *Operating standard.* For any topping-cycle cogeneration facility, the useful thermal energy output of the facility must, during any calendar year period, be no less than 5 percent of the total energy output.

(2) *Efficiency standard.* (i) For any topping-cycle cogeneration facility for which any of the energy input is natural gas or oil, and the installation of which began on or after March 13, 1980, the useful power output of the facility plus one-half the useful thermal energy output, during any calendar year period, must:

(A) subject to subclause (B), be no less than 42.5 percent of the total energy input of natural gas and oil to the facility; or

(B) if the useful thermal energy output is less than 15 percent of the total energy output of the facility, be no less than 45 percent of the total energy input of natural gas and oil to the facility.

(ii) For any topping-cycle cogeneration facility not subject to clause (i), there is no efficiency standard.

(b) *Efficiency standards for bottoming-cycle facilities.*

(1) For any bottoming-cycle cogeneration facility for which any of the energy input as supplementary firing is natural gas or oil, and the installation of which began on or after March 13, 1980, the useful power output of the facility must, during any calendar year period, be no less than 45 percent of the energy input of natural gas and oil for supplementary firing.

(2) For any bottoming-cycle cogeneration facility not covered by subparagraph (1), there is no efficiency standard.

(c) *Exemption from incremental pricing.* (1) Natural gas used in any topping-cycle cogeneration facility is eligible for an exemption from incremental pricing under Title II of the Natural Gas Policy Act of 1978 (NGPA) and Part 282 of the Commission's rules if:

(i) the facility meets the operating and efficiency standards under paragraphs (a)(1) and (2)(i) of this section and is a qualifying facility under § 292.203(b)(1); or

(ii) the facility is a qualifying facility under Subpart E of this part.

(2) Natural gas used in any bottoming-cycle cogeneration facility, not subject to an exemption from incremental pricing under Subpart E of this part, is eligible for an exemption under Title II of the NGPA and Part 282 of the Commission's rules to the extent that reject heat emerging from the useful thermal energy process is made available for use for power production.

(3) Nothing in this subpart affects any exemption provided under Subpart E of this part.

(4) Natural gas used for supplementary firing in any cogeneration facility is not eligible under this part for exemption from incremental pricing.

(d) *Waiver.* The Commission may waive any of the requirements of paragraphs (a), (b) and (c) upon a showing that the facility will produce significant energy savings.

§ 292.206 *Ownership criteria.*

(a) *General rule.* A cogeneration facility or small power production facility may not be owned by a person primarily engaged in the generation or sale of electric power (other than electric power solely from cogeneration facilities or small power production facilities).

(b) *Ownership test.* For purposes of this section, a cogeneration or small production facility shall be considered to be owned by a person primarily engaged in the generation or sale of electric power, if more than 50 percent of the equity interest in the facility is held by an electric utility or utilities, or by a public utility holding company, or companies, or any combination thereof. If a wholly or partially owned subsidiary of an electric utility or public utility holding company has an ownership interest of a facility, the subsidiary's ownership interest shall be considered as ownership by an electric utility or public utility holding company.

§ 292.207 *Procedures for obtaining qualifying status.*

(a) *Qualification.* (1) A small power production facility or cogeneration facility which meets the criteria for qualification set forth in § 292.203 is a qualifying facility.

(2) The owner or operator of any facility qualifying under this paragraph shall furnish notice to the Commission providing the information set forth in paragraph (b)(2)(i) through (iv).

(b) *Optional procedure.* (1) *Application for Commission certification.* Pursuant to the provisions of this paragraph, the owner or operator of the facility may file with this Commission an application for Commission certification that the facility is a qualifying facility.

(2) *General contents of application.* The application shall contain the following information:

(i) the name and address of the applicant and location of the facility;

(ii) a brief description of the facility, including a statement indicating whether such facility is a small power production facility or a cogeneration facility;

(iii) the primary energy source used or to be used by the facility;

(iv) the power production capacity of the facility; and

(v) the percentage of ownership by any electric utility or by any public utility holding company, or by any person owned by either.

(3) *Additional application requirements for small power production facilities.* An application by a small power producer for Commission certification shall contain the following additional information:

(i) the location of the facility in relation to any other small power production facilities located within one mile of the facility, owned by the applicant which use the same energy source; and

(ii) information identifying any planned usage of natural gas, oil or coal.

(4) *Additional application requirements for cogeneration facilities.* An application by a cogenerator for Commission certification shall contain the following additional information:

(i) a description of the cogeneration system, including whether the facility is a topping or bottoming cycle and sufficient information to determine that any applicable requirements under § 292.205 will be met; and

(ii) the date installation of the facility began or will begin.

(5) *Commission action.* Within 90 days of the filing of an application, the Commission shall issue an order granting or denying the application, tolling the time for issuance of an order, or setting the matter for hearing. Any order denying certification shall identify the specific requirements which were not met. If no order is issued within 90 days of the filing of the complete application, it shall be deemed to have been granted.

(c) *Notice requirements for facilities of 500 kw or more.* An electric utility is not required to purchase electric energy from a facility within a design capacity of 500 kw or more until 90 days after the facility notifies the utility that it is a qualifying facility, or 90 days after the facility has applied to the Commission under paragraph (b).

(d) *Revocation of qualifying status.* (1) The Commission may revoke the qualifying status of a qualifying facility which has been certified under this section if such facility fails to comply with any of the statements contained in its application for Commission certification.

(2) Prior to undertaking any substantial alteration or modification of a qualifying facility which has been certified under this section, a small power producer or cogenerator may apply to the Commission for a determination that the proposed alteration or modification will not result in a revocation of qualifying status.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

[18 CFR Part 292]

(Docket Nos. RM79-54 and RM79-55)

ORDER GRANTING IN PART AND DENYING IN PART REHEARING OF ORDER NOS. 69 AND 70, AND AMENDING REGULATIONS

(Issued May 15, 1980)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Order Granting in Part and Denying in Part Rehearing of Order Nos. 69 and 70, and Amending Regulations.

SUMMARY: The Federal Energy Regulatory Commission (Commission) hereby adopts an order granting in part and denying in part petitions for amendment of Order Nos. 69 and 70. The Order amends four sections of the Commission's rules involving small power production. The amendments involve the definition of "total energy input," general requirements for qualification of new dual-fuel cogeneration facilities, fuel use criteria for qualifying small power production facilities, and the exemption of qualifying facilities from sections 19 and 20 of the Federal Power Act.

EFFECTIVE DATE: May 15, 1980.

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Docket Nos. RM79-54 and RM79-55

Before Commissioners:

Charles B. Curtis, *Chairman;*
Georgiana Sheldon, Matthew Holden, Jr.
and George R. Hall.

SMALL POWER PRODUCTION AND COGENERATION FACILITIES — RATES AND EXEMPTIONS, QUALIFYING STATUS

ORDER GRANTING IN PART AND DENYING IN PART REHEARING OF ORDER NOS. 69 AND 70, AND AMENDING REGULATIONS

(Issued May 15, 1980)

On February 19, 1980, the Federal Energy Regulatory Commission (Commission) issued Order No. 69, the "Final Rule Regarding the Implementation of Section 210 of the Public Utility Regulatory Policies Act of 1978" (PURPA) in Docket No. RM79-55.[1] The Commission received six applications for rehearing or reconsideration.[2]

1 45 *Fed. Reg.* 12214 (February 25, 1980).

2 Southern Company Services, Inc. (March 14, 1980), Essex Development Association (March 14, 1980), American Electric Power Service

On March 13, 1980 the Commission issued, in Docket No. RM79-54, Order No. 70, the "Final Rule Establishing Requirements and Procedures for a Determination of Qualifying Status for Small Power Production and Cogeneration Facilities."[3] That rule established criteria and procedures whereby

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Corporation (March 14, 1980), Edison Electric Institute (March 20, 1980), Consolidated Edison Company and Boston Edison Company (March 20, 1980), and Colorado-Ute Electric Association, Inc. (April 11, 1980).

The Commission notes that, while there is no express statutory right to rehearing of rules issued under section 210 of PURPA, there is a statutory right to rehearing of rules issued under section 201 of PURPA, which amended the Federal Power Act (FPA) by adding sections 3(17)-3(22). The Commission's view is that Congress, in incorporating by reference the enforcement provision of the Federal Power Act (Section 210h of PURPA), intended also to incorporate by reference the rehearing and judicial review provision of the Federal Power Act.

In addition, a case involving the Natural Gas Act and the Natural Gas Policy Act of 1978, the Court observed that

> . . . it is often not possible to draw a precise line separating the boundaries of the two Acts. Implementation of many NGPA provisions requires conduct by FERC authorized under both Acts. As a result, the promulgation of rules may entail the exercise of authority under both the NGA and the NGPA. *Ecee, Inc.* v. *Federal Energy Regulatory Commission*, 611 F.2d 554, 564-566 (5th Cir. 1980).

The Commission notes that section 210 of PURPA and sections 3(17)-3(22) of the FPA, as added by section 201 of PURPA, are, to a large extent, interrelated. Section 201 of PURPA establishes the criteria and procedures by which a cogeneration or small power production facility can become a "qualifying" facility; section 210 of PURPA establishes rates for sales and purchases of electric power between qualifying facilities and electric utilities, and exempts qualifying facilities from certain State and Federal regulation. The relationship between the FPA and PURPA in this proceeding is thus similar to that between the NGA and the NGPA. For the reasons set forth in *Ecee*, the issues will be more clearly delinated, and the task of separating interrelated sections will be obviated, if these rulemakings are subject to review in the same forum. The Commission expects that any review of its order on rehearing in Docket Nos. RM79-54 and RM79-55, would occur in the Courts of Appeal, pursuant to section 313(b) of the FPA.

3 45 *Fed. Reg.* 17959 (March 20, 1980).

small power production and cogeneration facilities could determine if they were eligible to receive the rate benefits and exemptions set forth in the Commission's rules implementing section 210 of PURPA.

The Commission received four petitions for rehearing of Docket No. RM79-54.[4]

With the exception of arguments discussed below, these applications raised no new matters of fact or law.

ORDER NO. 69

Interconnection § 292.303(c)

Consolidated Edison Company (Con Ed), Boston Edison Company, and Edison Electric Institute (EEI) recommended that the Commission determine that the interconnection procedures set forth in sections 210 and 212 of the Federal Power Act (FPA) are applicable to qualifying facilities, rather than requiring electric utilities to interconnect with a qualifying facility as an act included within the obligation to purchase, and not requiring an evidentiary hearing and the rendering of certain findings required under sections 210 and 212 of the FPA. In the final rule, the Commission observed that section 212(e) of the FPA provides that no provision of section 210 of the FPA should be treated as an exclusive means of obtaining relief.[5] The Commission interpreted this provision to mean that the existence of any authority under section 210 of the FPA to require interconnection should not be interpreted as exclusive of any other interconnection authority available under any other law. The Commission interpreted section 210(a) of PURPA as providing a broad grant of authority to prescribe

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4 Southern Company Services, Inc. (April 11, 1980), Consolidated Edison Company (April 14, 1980), Southern California Gas Company (April 14, 1980), Elizabethtown Gas Company (April 14, 1980).

5 Section 212(e) of the FPA states that no provision of section 210 of the FPA shall be treated "(1) as requiring any person to utilize the authority of such section 210 or 211 in lieu of any authority of law, or (2) as limiting, impairing, or otherwise affecting any other authority of the Commission under any other provision of law."

rules necessary to encourage cogeneration and small power production, including the authority to require interconnection.

In their application, Con Ed and Boston Edison argued that the fact that Congress prohibited the Commission from exempting any qualifying facility from the provisions of sections 210 or 212 of the FPA renders moot or irrelevant the express ability of the Commission to resort to other authority to require interconnections. They state that while section 210(a) of PURPA provides the FERC with a broad mandate to prescribe rules as it determines necessary, the Congress, in section 210(e) specifically prohibited the Commission from exempting any qualifying facility from the provisions of sections 210 or 212 of the FPA. As a result, Con Ed and Boston Edison claim that to read section 210(a) of PURPA as granting the "very authority specifically denied in section 210(e) of PURPA is to render the latter subsection utter surplusage."

The primary question arising from these claims is the proper interpretation of section 210(e)(3)(B) of PURPA, which provides that qualifying facilities cannot be exempted from sections 210, 211, and 212 of the FPA.

Section 210 of the FPA grants to electric utilities, Federal power marketing agencies, and qualifying cogenerators and small power producers the right to apply for a Commission order requiring interconnection. The "target" of such an interconnection order can be "any cogeneration facility, any small power production facility, or the transmission facilities of any electric utility."[6]

Thus, in the procedures set forth in sections 210 and 212 of the FPA, qualifying facilities may either be applicants for interconnection orders, or targets of such interconnection orders. These sections confer upon qualifying facilities the right to apply for interconnection orders; they also impose on qualifying facilities the obligation and liability to be subjected to interconnection orders.

Section 210(e) of PURPA sets forth categories of State and Federal laws from which qualifying facilities can be exempted.

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6 Section 210(a)(1)(A), Federal Power Act.

The intent of this exemption is to remove the burden associated with being subjected to regulations as an electric utility under the FPA, the Public Utility Holding Company Act, and State laws regulating rates and financial organizations of electric utilities. The Joint Explanatory Statement of the Committee of Conference (Conference Report) accompanying PURPA states that rate regulation of qualifying facilities is to be done in a "less burdensome manner than traditional utility-rate regulation."[7] It further notes that

> [t]he establishment of utility type regulation over (cogeneration and small power production facilities) would act as a significant disincentive to firms interested in cogeneration and small power production.[8]

Thus, by exempting qualifying facilities from this type of regulation, Congress relieved them from liabilities and requirements to which others (*viz.*, non-qualifying facilities) are subject. Use of the word "exempt" in this context is consistent with its definition: "to release or deliver from some liability or requirement to which others are subject."[9] To "exempt" qualifying facilities does not mean to deny them a privelege [sic] or right to which they would otherwise be entitled; to exempt means to relieve of undesirable responsibility or obligation.

Sections 210 and 212 provide that, if the Commission makes certain determinations, it can impose obligations on qualifying facilities, including requiring the physical connection of the qualifying facility with the applicant, the sale or exchange or [sic] electric energy, or an increase in transmission capacity necessary to carry out these provisions. The Commission believes it is from these obligations that section 210(e)(3)(B) provides that qualifying facilities may not be exempted. Unlike the interpretation proffered by Con Ed and Boston Edison this

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7 Conference Report in H.R. 4018, Public Utility Regulatory Policies Act of 1978, H.R. Rep. No. 1750, 95th Cong., 2d Sess. 97 (1978).

8 *Id.*

9 Webster's Third New International Dictionary (1976).

reading comports with the plain meaning of the statute and with the accepted use of the language. And because qualifying facilities remain liable to being a target to an order under sections 210 and 212 of the FPA, section 210(e)(3)(B) is not "render[ed] utter surplusage."[10]

Under Con Ed's and Boston Edison's reading, section 210(e)(3)(B) of PURPA would also mean that qualifying facilities may not be exempted from applying under section 210 of the FPA to the Commission for an order requiring interconnection. The Commission notes that the ability to *apply* for an interconnection order is not a duty, liability, or requirement to which a qualifying facility is subject; it is a grant of standing to request the Commission to impose an obligation on another party (viz., a target of an interconnection order).[11]

Under Con Ed's reading, the Commission may not "exempt" a qualifying facility from this statutory privilege. Since, as noted previously, to exempt means to relieve of liabilities, and not be excluded from rights or privileges, this interpretation does not seem consonant with the plain meaning of the statutory language.

Transmission § 292.303(d)

Southern Company Services, Inc. (Southern Company), stated that § 292.303(d) appears to prohibit an electric utility transmitting from a qualifying facility to another electric utility from levying a transmission charge. This interpretation is not the one intended by the Commission. The sentence in question states that "[t]he rate for purchase by the electric utility to which such energy is transmitted . . . shall not include any charges for transmission." This phrase is intended to limit the amount that the utility to which electric energy is ultimately

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10 Petition for Rehearing and Reconsideration, Con Ed and Boston Edison, *supra* note 1, *mimeo* at 6.

11 Indeed, the ability to apply for an order imposing an obligation to wheel or transmit power was not conferred upon qualifying facilities; thus exclusion from being an applicant is an important distinction between sections 210 and 211 of the FPA.

delivered must pay. This sentence provides that the purchasing utility need purchase this energy at a rate which reflects the costs it can avoid as a result of making such a purchase, and that any costs incurred to deliver the energy to it are the responsibility of the selling qualifying facility. (The transmitting utility may, however, agree to bear some or all of the transmission costs.)

The Commission does intend that an electric utility which *transmits* energy from a qualifying facility to another electric utility be permitted to receive reimbursement for this transmission service. As noted by Southern Company Services, this intent is expressed in the preamble, where the Commission stated:

> In the case of electric utilities not subject to the jurisdiction of this Commission, these (transmission) charges should be determined under applicable State law or regulation which may permit agreement between the qualifying facility and any electric utility which transmits energy or capacity with the consent of the qualifying facility. For utilities subject to the Commission's jurisdiction under Part II of the Federal Power Act, these charges will be determined pursuant to Part II.[12]

Southern Company recommends that these provisions be added to section 292.303(d), in place of the sentence which provides that rates for purchases shall not include any charges for transmission. The Commission believes that the provision as issued is acceptable. With this clarification, the proper interpretation should be clear.

Exemptions § 292.601(b)

On March 19, 1980, Essex Development Associates (Essex) filed a Motion for Clarification of Order No. 69. Essex observed that the Commission did not exempt qualifying facilities from sections 19 and 20 of the Federal Power Act

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12 Order No. 70, *supra, mimeo* at 32.

(FPA or Act). Essex stated that these sections provide the Commission with discretionary jurisdiction to regulate rates and the issuance of securities by licencees under Part I of the Federal Power Act. Essex contends that the intent of section 210 of PURPA and of Order No. 69, is to eliminate utility-type regulation of cogenerators and small power producers, without regard to the status of the facility as a licensee under Part I of the Federal Power Act. Essex requests that the Commission amend Order No. 69 to exempt qualifying facilities from sections 19 and 20 of the FPA, or that the Commission waive its rights under sections 19 and 20 to regulate a qualifying small power producer.

It should be noted that section 210(e)(3)(C) of PURPA provides that no qualifying facility may be exempted from

> . . . any license or permit requirement under Part I of the Federal Power Act, any provision under such Act related to such a license or permit requirement, or the necessary authorities for enforcement of any such requirement.

The threshhold [sic] question is whether this section should be interpreted to prevent the exemption of qualifying facilities from sections 19 and 20 of the Federal Power Act.

The intent of section 210(e) of PURPA, and of § 292.601 of the Commission's regulations (exemption to qualifying facilities from the Federal Power Act), is to remove the disincentive associated with utility-type regulation.[13] In Order No. 69, the Commission exempted qualifying facilities from cost-of-service regulation of rates, and from regulation of securities to which jurisdictional public utilities are subject under Part II of the Federal Power Act. In addition, within the statutory parameters, the Commission exempted qualifying facilities from regulation as electric utilities under the Public Utility Holding Company Act, and from State regulation of rates and financial organization.

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13 Conference Report in H. R. 4018, Public Utility Regulatory Policies Act of 1978, H. R. Rep. No. 1750, 95th Cong., 2nd Sess. 98 (1978).

Regulation under Part II of the Federal Power Act chiefly involves regulation of rates and financial organization, while regulation under Part I of the Act concerns the licensing of hydroelectric projects. A licensed project under Part I of the Federal Power Act may also be a qualifying small power producer, if it meets the size and ownership requirements set forth in Order No. 70.[14]

In pertinent part, section 19 of the Federal Power Act provides that, as a condition of a license, a licensee "developing, transmitting, or distributing power for sale or use in public service," shall abide by the rate and service regulation of any duly constituted agency of the State in which such service is provided. If power is provided in a State in which there is no authorized regulatory commission to regulate the rates for sales of power, or the issuance of securities by a licensee, jurisdiction is conferred on the Commission to regulate these matters.

Section 20 of the FPA provides that, with regard to power from a licensed project that enters interstate or foreign commerce, the rate charged shall be "reasonable, nondiscriminatory, and just to the customer," and all "unreasonable discriminatory and unjust rates" are prohibited. It provides that if any State affected has not established a commission to enforce these requirements, or to regulate the issuance of securities, or if any parties or States are unable to agree on appropriate regulation, jurisdiction is conferred on the Commission to regulate these activities.

The Commission observes that most of the provisions of Part I of the Act impose conditions and restrictions on the

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14 Section 292.206 of the Commission's rules provides that a facility cannot qualify if more than 50 percent of the equity interest in the facility is held by an electric utility or utilities, or public utility holding companies. Section 292.204(a) provides that the power production capacity of a qualifying facility may not exceed 80 megawatts. Pursuant to § 292.601 (Order No. 69), only small power production facilities of 30 mw or less are exempted from the Federal Power Act, the Public Utility Holding Company Act, and State regulation, except biomass facilities between 30 and 80 megawatts, which are exempt from State regulation and from the Public Utility Holding Company Act.

construction and operation of hydroelectric facilities, which require that licensed projects comply with comprehensive development of the nation's waterways. As a result, the Commission perceives no inconsistency in exempting licensed projects that are qualifying facilities from State and Federal regulation of rates and financial organization, and maintaining Federal regulation of the physical structure of such facilities, and their manner of operation. The Commission believes that the limitation on exemption from the Federal Power Act set forth in section 210(e)(3)(C) of PURPA was intended to ensure that licensees comply with the requirements concerning comprehensive development of waterways, and ensure that they do not build or operate hydroelectric projects in a manner inconsistent with the public interest.

Nowhere in the legislative history of section 210, or in the Conference Report, does there appear any indication that qualifying facilities that are licensed hydroelectric projects were intended to be singled out for utility-type rate or securities regulation. To subject these licensed projects to such regulation would be inconsistent with the intent of this section of PURPA—to encourage cogeneration and small power production. Thus, the Commission finds no basis to subject small power producer licensees to regulation under sections 19 and 20 of the Act, when they would otherwise be exempted from utility-type regulation at both the Federal and State levels.[15]

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[15] The Commission observes that even if exemption from these provisions were not granted, the residual grant of authority to the Commission set forth in sections 19 and 20 is consistent with the rate and exemption provisions of section 210 of PURPA, and with Order No. 69. Section 210(b) provides that rates for purchases from qualifying facilities shall be "just and reasonable to the electric consumers of the electric utility and in the public interest, and shall not discriminate against qualifying facilities." Section 292.304(a) repeats these statutory requirements. Section 210(f) of PURPA and § 292.401 of the Commission's rules require that, within one year after the Commission's rules take effect, each State regulatory authority is to implement the rules issued by the Commission regarding rates for purchases and sales of electric energy and capacity between qualifying facilities and electric utilities. After State implementation takes place, compliance with section 19—whether viewed as State regulation in the first instance or residual Federal regulation—would be accomplished through the State's program implementing section 210 of PURPA, and Order No.

Moreover, the Commission finds no basis to believe that section 210 of PURPA was intended to grant exemptions from the regulations of rates and financial organization, and yet to retain the authority to impose regulation of rates and the issuance of securities for one class of small power producers.

Rules of statutory construction indicate that the Commission should look to the object to be accomplished, and the evils sought to be remedied.[16] Moreover, a statute should be construed so as to effect its purpose.[17] The Commission has cited the reference in the Conference Report regarding its disincentives associated with "utility type regulation." It further cites the Conference Report statement that

> [I]t is not the intention of the conferees that cogeneration and small power producers become subject . . . to the type of examination that is traditionally given to electric utility rate applications to determine what is the just and reasonable rate that they should receive for their electric power.[18]

The authority contained in sections 19 and 20 of the Federal Power Act would reserve to the Commission the authority to impose this type of utility regulation on qualifying small power producer licensees. The possibility that such regulation will be imposed could reduce the encouragement of development of small power production which the Congress, in section 210 of PURPA, and the Commission, in Order No. 69, intended to

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69. Similarly, the requirements set forth in section 20 regarding the rates for power from licensed projects are not inconsistent with the requirements of section 210 of PURPA, or Order No. 69. Again, regulation under section 210 of PURPA would constitute the vehicle for regulation under section 20 of the Act. (For qualifying small power production facilities greater than 30 mw, where the facility is subject to Commission jurisdiction under Part II of the Federal Power Act, the Commission will establish rates for purchase in accordance with the avoided cost principles set forth in § 292.304).

16 82 C. J. S. *Statutes* § 323.

17 *Id.*

18 Conference Report, *supra* note 13, at 97.

provide. For the reasons set forth, the Commission finds it appropriate to exempt qualifying facilities from these sections of the Federal Power Act.

Accordingly, the Commission amends § 292.601(b)(1), so as to exempt qualifying facilities from sections 19 and 20 of the Federal Power Act.

ORDER NO. 70

Definitions § 292.202

Sections 292.202(i) and 292.202(j), define the "total energy output" and "total energy input" of a qualifying facility. Dividing the total energy output by the total energy input indicates the efficiency of the facility.

In § 292.202(j) of the final rule, energy obtained from supplementary firing was inadvertently excluded from the definition of total energy input. Since energy from supplementary firing was not excluded from the definition of total energy *output,* the rule would distort the efficiency of facilities in which large amounts of energy are supplied from supplementary firing, making them appear more efficient than they are.

To correct this unintended result, the Commission is amending the definition of total energy input so that it includes energy supplied from supplementary firing. This change will be accomplished by deleting the clause "other than supplementary firing" from the definition of total energy input.

Ownership § 292.206(b)

Southern California Gas Company (SCGC) and Elizabethtown Gas Company (Elizabethtown) contend that § 292.206(b) of the Commission's rules erroneously exclude from qualifying status facilities owned by public utility holding companies that are not engaged in the generation or sale of electricity other than from cogeneration facilities or small power production facilities. Elizabethtown states that the rules do not prohibit a gas distribution utility from owning a qualifying facility.

Sections 17(C)(ii) and 18(B)(ii) of the Federal Power Act require the Commission to limit qualifying status to facilities "owned by persons not primarily engaged in the generation or sale of electric power." Section 292.206 of the Commission's rules prohibits public utility holding companies from owning more than 50 percent of the equity interest of a qualifying facility.

The Commission did not intend to prohibit companies without any electric utility interests from owning qualifying facilities. However, because public utility holding companies are subject to many special restrictions, before changing this provision of its rules, the Commission believes it appropriate to consult with the Securities and Exchange Commission to determine whether permitting gas holding companies to own qualifying facilities is consistent with that agency's regulation of holding companies.

Fuel Use § 292.204(b)(1)

Southern Company takes exception to the fuel use criteria employed by the Commission in defining a qualifying small power production facility under § 292.204(b) of the rules. In the proposed rule, the term "primary energy source" was not defined. In response to several comments that standards should be established for determining the primary energy source, the Commission required in § 292.204(b)(1) of the final rule that more than 50 percent of the total energy input of a qualifying facility be from biomass, waste, renewable resources, or any combination thereof.

Southern Company states that a small power production facility which utilizes biomass, waste, or renewable resources as its "primary energy source" no more than 51 percent of the time, complies with the "sole" use requirement of the PURPA definition. Southern Company contends that this standard should be eliminated in favor of a standard which requires a small power production facility to use a higher percentage of renewable resources, waste, or biomass.

Two provisions of the rules are involved in this issue. Section 292.204(b)(2) provides that the oil, natural gas, and coal used

by a qualifying facility may not, in the aggregate, exceed 25 percent of the total energy input of the facility during any calendar year. As discussed in the preamble[19], comments received indicated that effective use of biomass or waste as fuels can require that as much as 25 percent of the heat input be from fossil fuel. To assure that these renewable resources qualify for the statutory benefits, the Commission adopted the "25 percent rule."

As noted above, § 292.204(b)(1)(i) provides that more than 50 percent of the total energy input to a qualifying small power production facility must be biomass, waste, renewable resources, or any combination thereof.

At this time, the Commission believes that there are virtually no eligible fuels which are feasible for use by a qualifying facility to fill the hiatus if it derives 50 percent of its energy input from biomass, waste or renewable resources, and 25 percent from oil, natural gas and coal. The Commission will accordingly amend this provision of its rule to require that at least 75 percent of the total energy input of a qualifying small power production facility be from biomass, waste, renewable resources, or any combination thereof.

§ 292.204(b)(2).

Southern Company also contends that the Commission's 25 percent limit on fossil fuel use by qualifying facilities is too broad, and is inconsistent with national energy policy. Southern Company argues that the Commission should adopt individual standards for each category of fossil fuel use listed in section 201 of PURPA, as appeared in the notice of proposed rulemaking.[20]

The Commission rejects this petition. The Commission based the 25 percent standard on the comments filed which

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19 Order No. 70, *supra,* mimeo at 38-40.

20 These categories include fuel used for ignition, startup, testing, flame stabilization, and control uses, and fuel used to alleviate or present unanticipated equipment outages and emergencies that would affect public health, safety or welfare. Section 3(17)(B), FPA.

generally favored a uniform aggregate standard. Commenters argued that separate standards for startups, flame stablization [sic] and outages are unnecessarily burdensome. They also claimed that some small power production technologies would be severely constrained by one of the standards while requiring little or no fossil fuel for other purposes. Additionally, the Commission believes that to the extent oil and natural gas remain more expensive than other energy sources available to small power producers, there is an economic disincentive to use more fossil fuel than is absolutely necessary.

Southern Company stated that the Commission's rules are inconsistent with standards promulgated under the Powerplant and Industrial Fuel Use Act of 1978 (FUA). The Commission notes that the FUA is intended to encourage the burning of coal in conventional power plants and industrial fuel burning plants. In contrast, sections 201 and 210 of PURPA are intended to encourage the cogeneration and electric generation through the use of biomass, waste, and renewable resources. Coal may not be used by a qualifying small power production facility as a primary energy source. Southern Company argues that the Commission should adopt, in its rules, the definition of "primary energy source" set forth in the interim rules implementing the FUA. These rules provide that a facility's consumption of oil and gas may not exceed five percent of the facility's annual Btu output. While the use of five percent gas or oil may be sufficient in combination with coal fuel, the burning of biomass or waste can require a greater use of gas of oil. Comments indicate that if the Commission were to adopt the more stringent five percent standard, the operation of many of these energy sources would not be feasible. Consequently, the Commission does not find that its rules are inconsistent with FUA standards, and rejects this proposed revision of the rules.

§ § 292.203(b) and 292.205

Southern Company and Con Ed submit that the Commission's rules are inconsistent with national energy policy in that

they allow cogeneration facilities to burn oil and natural gas. Both petitioners request that the Commission amend its rules to include fuel use criteria for cogeneration facilities which the Commission determines to be qualifying cogeneration facilities. The result, they contend, of the Commission's failure to include fuel use restrictions is to authorize the burning of oil or natural gas for generation of electricity in cogeneration units, which will displace electricity generated by coal, nuclear or hydro power.

Numerous comments on this issue were submitted during the rulemaking process. First, the Commission notes that these rules do not authorize any facility to burn oil or gas in contravention of any applicable Federal, State or local laws or regulations. Rather, their effect is to make facilities, some of which may be authorized to burn fossil fuels under other statutory authority, such as the FUA, eligible for the rate and exemption privileges set forth in section 210 of PURPA.

As noted in the preamble[21] the Commission believes that the legislative history, Congressional intent, and national energy policy support the use of oil and gas in cogeneration facilities. Section 206(c)(3) of the Natural Gas Policy Act, authorized the Commission to exempt gas used by qualifying cogeneration facilities from incremental pricing surcharges.

Furthermore, the Commission believes that economics will make the displacement of nuclear coal or hydro generated electricity by a cogenerator using oil or natural gas a rare occurrence. In most cases, electricity generated by a cogenerator using oil or gas fuels is more expensive than electrcity generated by nuclear, coal or hydro facilities. As a result, market forces, rather than an additional layer of Federal fuel use regulation, can effectively determine the appropriate use of oil or gas. For the above reasons the Commission denies the petition for amendment of this section of the rule.

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21 Order No. 70, *supra, mimeo* at 24-26.

Notice § 292.207

Southern Company and Con Ed petitioned the Commission to amend § 292.207 of its rules. This provision requires all qualifying facilities to furnish notice to the Commission of their status as qualifying facilities, and to provide a brief description of the facility and other pertinent data. The petitioners requested that the Commission require an applicant for certification of qualifying status intending to interconnect with a utility to furnish notice to the appropriate State regulatory authority and the utility with which it would interconnect.

The Commission has recently amended § 292.207(b)(6) of its rules.[22] This amendment requires that all applications for Commission certification of qualifying status include a notice of such request for publication in the *Federal Register.* The Commission believes that publication will provide adequate notice of applications for qualifying status. The Commission, therefore, rejects the petitions for amendment of § 292.207 of its rules.

Southern Company also petitioned the Commission to amend § 292.207(c) of the rule. This paragraph states that an electric utility is not required to purchase electric energy from a qualifying facility of 500 kilowatts or more until 90 days after the facility notifies the utility that it qualifies, or that it has applied to the Commission for qualification. Southern Company contended that this section implies that a utility is derelict if it does not begin purchasing power from a qualifying facility over 500 kilowatts within 90 days after the facility has notified the utility or applied to the Commission for certification as a qualifying facility. Southern Company believes that 90 days is not a sufficient time period in which it can adjust its system to receive the generation output of the qualifying facility. Southern Company requested amending § 292.207(c) to allow for a "reasonable time" in which it must begin purchasing power from a qualifying facility.

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22 Amendment to Final Rule Providing That Applications For Commission Certification of Qualifying Status Contain a Notice for Publication in the Federal Register, Order No. 70-A, Docket No. RM79-54, May 5, 1980.

Southern Company has erroneously interpreted § 292.207(c). Section 292.207(c) must be read in conjunction with § 292.207(b)7 and § 292.306. These sections provide that a utility is required to purchase power from a qualifying facility only if the facility meets all safety requirements, and pays for the appropriate interconnection costs as determined by the State regulatory authority. The 90-day requirement set out in § 292.207(c) establishes a minimum time period in which a utility must purchase power from a qualifying facility which has met all other applicable safety and interconnection requirements of the regulations. A utility need not purchase power from a qualifying facility until it meets these requirements, even if the 90-day period has elapsed. The Commission believes this interpretation of the regulation allows for a reasonable time period in which a utility must purchase power from a qualifying facility. Therefore, the Commission rejects the petition for amendment of this section.

Procedures for Obtaining Qualifying Status § 292.207

Con Ed states that the self-certifying procedure for obtaining qualifying status fails to inform utilities whether a particular facility is qualified. Under the proposed rule, all determinations of qualifications would have required Commission action on a case-by-case basis. Comments received indicated that when no affected party questions the eligibility of a facility, there is no need to require filing for qualification. As noted in the preamble to Order No. 70, the initiation of negotations concerning purchase and sale arrangements allows for the flow of information between potential qualifying facilities and affected electric utilities.[23] If a utility consides that a facility does not qualify, it is not obligated to purchase its electric output. In such cases, the facility may seek Commission certification under § 292.207(b). The Commission expects that, for the great majority of facilities requesting that utilities purchase their electric output, there will be no disagreement as to their

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23 Order No. 70, *supra*, *mimeo* at 19.

eligibility. In questionable cases, the rules as issued provide for Commission determination of the facility's status. Thus, the Commission perceives no need to require additional paperwork in uncontested determinations.

§ 292.206(d)

Con Ed requested that the Commission amend § 292.206(d) to include a mechanism for monitoring facilities to assure that the requirements for obtaining qualifying status continue to be met.

The Commission believes that the administrative costs associated with monitoring large numbers of qualifying facilities would be prohibitive. The Commission notes that section 201 of PURPA amended the Federal Power Act, and that these rules fall under the ambit of the enforcement provisions of sections 314 and 316 of the FPA. Under these provisions, an applicant that ceases to meet the requirements for qualifying status, and fails to notify the Commission pursuant to § 292.207(d)(2) may be subject to civil and criminal penalties. The Commission will investigate any complaints that qualifying requirements are not being met. As a result, the Commission believes it is not necessary to establish a monitoring system.

Evironmental Effects § 292.203(c)

In the Environmental Assessment (EA) issued with Docket No. RM79-54[24], the Commission determined that the incentives provided in this program will encourage the development of only one technology, commercial cogeneration primarily by new diesel engines, at a level where significant environmental effects may occur in the near-term. Con Ed contended that spark ignition and dual-fuel cogeneration engines will also be widely used in commercial applications and will produce a substantial environmental impact.

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[24] Notice of No Significant Impact and Notice of Intent to Prepare Environmental Impact Statement, issued March 31, 1980, Docket No. RM79—54, *mimeo* at 44.

Con Ed's petition does not refer to the discussion contained in the Appendices to the EA, referred to in the Commission's Notice accompanying the EA. In Appendix C the Commission stated:

> Dual-fuel engines and diesel engines are likely to be the primary equipment choice for commercial cogeneration. Combustion turbines are large (greater than about 1 MW) and cost about $900 to $1,000/Kw. Thus, investors would be facing equipment costs of about $1,000,000 to install one of these units. Spark ignition engines (similar to large gasoline-fuel truck engines) are insufficiently sturdy to warrant their use in continuous duty cogeneration. Despite the low capital costs for spark ignition engines compared with those for diesel engines, repair and maintenance costs for the former are substantially higher.
>
> Commercial cogeneration users will use natural gas as a fuel for dual-fuel engines whenever gas is available or less expensive than diesel fuel. In rural areas and in some urban areas of the Middle Atlantic region, natural gas is not available and distillate fuel use is expected. Thus, in these areas cogenerators will choose diesel engines. In large urban areas, because natural gas is available for potential cogenerators, cogenerators will install dual-fuel engines to take advantage of low-priced natural gas, even though a dual-fuel engine costs 20% to 30% more initially. We cannot precisely estimate the percent of the 2,500 MW of capacity that will be found in large urban areas. We estimate, however, that cogeneration in larger urban regions may account for 25 percent to 75 percent of the total.[25]

If gas is available for commercial or residential use in urban areas in the Middle Atlantic region, the installation of a great number of dual-fuel cogeneration engines in these areas might adversely affect the environment. Pending further environmen-

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25 EA, *supra*, Appendix C, *mimeo* at 7.

tal analysis, the Commission has decided to require that dual-fuel cogeneration facilities obtain qualification on a case-by-case basis, pursuant to the procedures set forth in section 292.207(b) of the Commission's rules. Before permitting new dual-fuel facilities to qualify, the Commission will consider the emission characteristics of the facility, and the number of qualifying cogeneration facilities in the vicinity of the applicant.

The Commission Orders:

(A) To the extent not granted above, the applications for rehearing and reconsideration of Order Nos. 69 and 70 filed by Southern Company Services, American Electric Power Service Corporation, Edison Electric Institute, Consolidated Edison Company, Boston Edison Company, Colorado-Ute Electric Association, Inc., Elizabethtown Gas Company and Southern California Gas Company are denied.

(B) Sections 292.202, 292.203, 292.204, and 292.601 are amended as set forth below effective on May 15, 1980.

(Public Utility Regulatory Polcies [sic] Act of 1978, 16 U.S.C. § 2601, *et seq.*; Energy Supply and Environmental Coordination Act, 15 U.S.C. § 791 *et seq.*; Federal Power Act, as amended, 16 U.S.C. § 792 *et seq.*, Department of Energy Organization Act, 42 U.S.C. § 7101 *et seq.*; E.O. 12009, 3 C.F.R. 142 (1978).)

In consideration of the foregoing, the Commission amends Part 292 of Chapter I, Title 18, Code of Federal Regulation, as set forth below, effective May 15, 1980.

By the Commission.
(SEAL)

KENNETH F. PLUMB,
Secretary.

1. Section 292.202 is amended in paragraph (j), to read as follows:

§ 292.202 *Definition.*

* * * * *

(j) "total energy input" means the total energy of all forms supplied from external sources.

* * * * *

2. Section 292.203 is amended in paragraph (j) by adding at the end thereof a new subparagraph (2) to read as follows.

§ 292.203 *General requirements for qualification.*

* * * * *

(c) *Interim exclusion.*

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(3) Pending further Commission action, any cogeneration facility which is a new dual-fuel cogeneration facility which seeks to obtain qualifying status must follow the procedures set forth in § 292.207(b) of this section.

(4) A new dual-fuel cogeneration facility is a cogeneration facility:

(i) which derives its useful power output from an internal combustion piston engine capable of changing automatically between gas and oil operation, and

(ii) the installation of which began on or after May 15, 1980.

* * * * *

3. Section 292.204 is amended in paragraph (b)(1)(i) to read as follows:

§ 292.204 *Criteria for qualifying small power production facilities.*

* * * * *

(b) *Fuel use.* (1)(i) The primary energy source of the facility must be biomass, waste, renewable resources, or any combination thereof, and more than 75 percent of the total energy input must be from these sources.

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4. Section 292.601 is amended in paragraph (b)(1), to read as follows:

§ 292.601 *Exemption to qualifying facilities from the Federal Power Act.*

* * * * *

(b) *General rule.* Any qualifying facility described in paragraph (a) shall be exempt from all sections of the Federal Power Act, except:

(1) sections 1-18, and 21-30;

* * * * *

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 80-1789—September Term, 1981

AMERICAN ELECTRIC POWER SERVICE CORPORATION, et al.,
Petitioners,

—v.—

FEDERAL ENERGY REGULATORY COMMISSION,
Respondent.

Petition for Review of Orders of the
Federal Energy Regulatory Commission

Before: ROBINSON, *Chief Judge,* WILKEY and
GINSBURG, *Circuit Judges*

JUDGMENT

This cause came on to be heard on a petition for review of orders of the Federal Energy Regulatory Commission, and was argued by counsel. On consideration, thereof, it is

ORDERED AND ADJUDGED by this Court that the orders of the Federal Energy Regulatory Commission are affirmed in part and vacated in part, in accordance with the opinion of this Court filed herein this date.

Per Curiam
For the Court

S/ GEORGE A. FISHER
Clerk

Date: January 22, 1982

Opinion for the Court filed by Circuit Judge Wilkey.

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 80-1789—September Term, 1981

ARGUED: 9-15-81

AMERICAN ELECTRIC POWER SERVICE CORPORATION, et al.,
Petitioners,

—v.—

FEDERAL ENERGY REGULATORY COMMISSION,
Respondent,

ELIZABETHTOWN GAS COMPANY,
AMERICAN PAPER INSTITUTE, INC.,
BROOKLYN UNION GAS CO.,
OCCIDENTAL GEOTHERMAL, INC.,
Intervenors.

Before: ROBINSON, *Chief Judge,* WILKEY AND GINSBURG,
Circuit Judges

ORDER

On consideration of respondent's petition for rehearing and of the brief of the American Paper Institute, Inc., in support thereof, it is

ORDERED by the Court that the petition for rehearing is denied.

A statement of the panel is attached.

Per Curiam

FOR THE COURT:

GEORGE A. FISHER, *Clerk*

By: S/ ROBERT A. BONNER
Robert A. Bonner
Chief Deputy Clerk

MEMORANDUM

In view of the distortions of the court's opinion served up in the petition for rehearing and suggestion for rehearing en banc filed by the Federal Energy Regulatory Commission (FERC or Commission), We believe it appropriate to restate the essence of the court's decision. FERC attacks two portions of the decision: (1) the disposition of the full avoided cost rule; (2) the rejection of FERC's grant of blanket authority to co-generators to "interconnect" with electric utilities. The Commission, with respect to both challenges, has read into the opinion much more than the court put there.

As to "avoided cost," FERC charges the court with having declared the Commission's rule "inconsistent with the statute." Petition at 2. The court did no such thing. It simply remanded the matter because the Commission had failed to explain "its rationale and process of consideration." Slip op. at 10.* The

* The court noted particularly that FERC adopted as its rule the upper limit Congress authorized and did not clarify whether it considered and, if so, why it rejected a more flexible approach, for example, "permit[ting] state commissions to set rates within a range—*e.g.*, 80-100 percent [of full avoided cost]—authorized by the Commission." Slip op. at 13-14.

opinion plainly states that "[t]he Commission may be right in its conclusion, but it needs to make its reasoning and findings explicit." Slip op. at 12. Some of the suggested considerations expressed in the opinion may indeed have ready answers. *See* slip op. at 14-18. If that is so, it should not be burdensome for FERC to supply them. But the central point made by the court, that FERC never bothered to present a cogent justification of its rule in light of the statutory instructions, slip op. at 10-14, is not vulnerable to the broadside that the court acted "out-of-bounds." Petition at 10. Nor is a petition for rehearing the proper place to supply the reasoned explanation the court's opinion requires.

FERC takes similar liberties with the court's treatment of the "interconnection" issue. The Commission apparently acknowledges that the court correctly conveyed the literal meaning of the statutory sections in question, but complains that the "necessary consequence" of such a literal reading is to force "full dress evidentiary adjudication." Petition at 14. The "consequence" FERC describes, however, is not inevitable. As the opinion points out: "[T]he Commission need not impose substantial administrative burdens . . . but rather can adopt streamlined procedures. If . . . even streamlined procedures are too burdensome, the necessary amendment must come from Congress." The court was not insensitive to the objective FERC sought to accomplish, but as the opinion points out, a court is not the proper forum to repair a congressional product that may have been less than fully considered.

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AMERICAN PAPER INSTITUTE, INC.,
BROOKLYN UNION GAS CO.,
OCCIDENTAL GEOTHERMAL, INC.,
Intervenors.

Before:
ROBINSON, *Chief Judge,* WRIGHT, TAMM, MACKINNON,
ROBB, WILKEY, WALD, MIKVA, EDWARDS, GINSBURG
and BORK, *Circuit Judges*

ORDER

Respondent's suggestion for rehearing *en banc* and the brief of the American Paper Institute, Inc., in support thereof have

been circulated to the full Court and a majority of the Court has not voted in favor thereof. On consideration of the foregoing, it is

ORDERED by the Court that the aforesaid suggestion is denied.

Per Curiam

FOR THE COURT:

GEORGE A. FISHER, *Clerk*

By: S/ ROBERT A. BONNER
Robert A. Bonner
Chief Deputy Clerk

Circuit Judges Wright, Tamm, MacKinnon, Robb, Edwards and Bork did not participate in this order.

Circuit Judges Wald and Mikva would grant the suggestion for rehearing *en banc*. Their statement is attached.

We would rehear the case *en banc* because of the importance of the issues to major new energy programs of cogeneration and small power production and because of serious doubts over the panel's resolution of those issues. The main issue before the court is whether the Federal Energy Regulatory Commission ("Commission") acted arbitrarily and capriciously by choosing a rate that it believed would provide the greatest incentives for cogeneration, as well as the greatest incentives to decrease our national reliance on fossil fuels, without leading to any increase in rates paid by electric utility consumers. The Commission explained that its fully avoided

cost rule would serve these goals.[1] The panel rejected the Commission's determination for failure to explain adequately how utility consumers' interests had been accommodated, specifically with respect to rejection of one particular alternative to fully avoided costs. As we read the Commission's opinion, however, it found that the appropriate balance of statutory interests had been struck in a rate that would encourage cogeneration without raising rates to consumers. This determination seems reasonable, and we doubt that any further explanation, especially in the way of factual findings, *see* slip op. at 13, was necessary to satisfy the requirements of the Administrative Procedure Act, 5 U.S.C. § 706(2)(A).[2]

The panel's resolution of the interconnection issue is also troubling. The panel has interpreted an incredibly complex and ambiguous interlace of statutory sections to require a fullscale

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1 Although the Commission did not expressly address the interests of consumers in its discussion of the fixed percentage method, *see* R. 3460, it discussed the impact of a full avoided cost method on these interests in its discussion of the comments made to the Commission. The Commission stated:

> Although use of the full avoided cost standard will not produce any rate savings to the utility's customers, several commenters stated that these ratepayers and the nation as a whole will benefit from the decreased reliance on scarce fossil fuels, such as oil and gas, and the more efficient use of energy.
>
> The Commission notes that, in most instances, if part of the savings from cogeneration and small power production were allocated among the utilities' ratepayers, any rate reductions will be insignificant for any individual customer. On the other hand, if these savings are allocated to the relatively small class of qualifying cogenerators and small power producers, they may provide a significant incentive for a higher growth rate of these technologies.

R. 3457-58.

2 The panel's opinion appears to assume that the substantial evidence test governs review of rules promulgated under the Public Utility and Regulatory Policies Act of 1978, Pub. L. No. 95-617, 92 Stat. 3117 ("PURPA"). *See* slip op. at 13 (*citing* Public Sys. v. FERC, 606 F.2d 973 (D.C. Cir. 1979)). PURPA, however, does not set forth a heightened standard of review. The avoided cost rule is therefore subject to the general requirements of the APA, and may be overturned if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A).

evidentiary hearing prior to any interconnections for the sale or purchase of cogenerated power.[3] In so doing, it has rejected FERC's alternative interpretation of the statute that would simply prevent the Commission from *requiring* a cogenerator to interconnect without providing for an evidentiary hearing. The alternative interpretation is a plausible one and appears to be more closely in line with Congress' expressed desire to encourage cogeneration. This alternative reading should receive closer scrutiny by this court before it erects a formidable, perhaps insurmountable, roadblock to a major energy program.

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3 The panel asserts that the Commission could adopt "streamlined" procedures, *see* slip op. at 25, but fails to explain how anything less than an evidentiary hearing would satisfy the requirements it imports from section 210 of the Federal Power Act, 16 U.S.C. § 824i.